


**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER QUALITY
ELLEN GILINSKY, Ph.D., DIRECTOR**

P.O. BOX 1105

Richmond, VA 23218

Subject: Guidance Memo No. 08-2006
Implementation Guidance for Reissuance of VPDES General Permit VAG83 - VPDES General Permit Regulation for Discharges From Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests, 9 VAC 25-120

TO: Regional Directors

FROM: Ellen Gilinsky, Ph.D., Director 

DATE: May 13, 2008

COPIES: James Golden, Rick Weeks, Regional Water Permit Managers, Regional Remediation Managers, Regional Waste Permit Managers, Regional Water Compliance Managers

Summary:

On December 4, 2007, the State Water Control Board adopted amendments to the General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests, 9 VAC 25-120. The adopted regulation became effective on February 6, 2008. Subsequent to the adoption, several errors were found in the regulation. The Board adopted amendments to correct the errors on April 10th, and they are expected to become effective on June 11, 2008.

The general permit (VAG83) became effective on February 26, 2008, and expires on February 25, 2013. This general permit replaces the General VPDES Permit for Discharges from Petroleum Contaminated Sites and Hydrostatic Tests that expired on February 25, 2008.

This guidance is intended to aid regional permit writers and petroleum program case managers with the management of sites requesting coverage under this permit. A copy of the adopted regulation, permit fact sheet, general permit pages, and Registration Statement are attached. The guidance also contains example letters that staff may use for the administration of this regulation, along with forms that permittees may use to request termination of coverage and transfer of ownership. This guidance replaces GM04-2001.

Electronic Copy:

An electronic copy of this guidance in PDF format is available for staff internally on DEQNET, and for the general public on DEQ's website at: www.deq.virginia.gov/waterguidance/permits.html.

Contact information:

Please contact Burt Tuxford, Office of Water Permits and Compliance Assistance, at (804) 698-4086 or brtuxford@deq.virginia.gov with any questions regarding the application of this guidance.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any particular method for the analysis of data, establishment of a wasteload allocation, or establishment of a permit limit. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

Implementation Guidance for Reissuance of VPDES General Permit for Discharges From Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests, VAG83

1. Introduction

On December 4, 2007, the State Water Control Board adopted amendments to the General VPDES Permit Regulation for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests, 9 VAC 25-120. The adopted regulation became effective on February 6, 2008. Subsequent to the adoption, several errors were found in the regulation. The Board adopted amendments to correct the errors on April 10th, and they are expected to become effective on June 11, 2008. The corrections are discussed in Section 2 below.

The general permit became effective on February 26, 2008, and expires on February 25, 2013. This permit replaces the General VPDES Permit for Discharges from Petroleum Contaminated Sites and Hydrostatic Tests that expired on February 25, 2008. Persons who were permitted to discharge under the expired permit who wish to continue to discharge under a general permit must register for coverage under this new permit. A copy of the adopted regulation (with corrections as noted above), the final version of the fact sheet, the general permit, the registration statement, including instructions, and example letters are attached. These documents are also available in electronic format on DEQNET. This guidance replaces Guidance Memo 04-2001.

2. Changes to the Regulation and General Permit

The significant changes to the regulation and general permit are as follows:

a. Changed the title of the regulation to "General Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation For Discharges From Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests" to more clearly indicate the scope of permit coverage.

b. Added "wastewaters from sites contaminated by chlorinated hydrocarbon solvents" to the list of discharges covered by the permit. Added effluent limitations and monitoring requirements for discharges of water contaminated by chlorinated hydrocarbon solvents.

Chlorinated hydrocarbon solvents are common groundwater contaminants. At the present time, persons wishing to clean up sites contaminated with these constituents must recover them and take them to an offsite treatment facility, or receive coverage under an individual VPDES permit. The cost of hauling wastewater to an offsite facility and the costs and time involved to apply for and receive an individual VPDES permit are barriers to cleanup, reuse, and economic redevelopment of brownfields. Combining petroleum and solvent discharges within the same general permit is not a new concept. Several other states have "groundwater remediation general permits" that cover discharges from both petroleum and solvent cleanups. The treatment systems used to remove chlorinated hydrocarbon solvents from wastewater are the same as or very similar to those used to remove petroleum (especially gasoline) constituents from wastewater. The effluent limits derived for this general permit are based on the most conservative values identified (usually Public Water Supply standards) and will effectively protect both human health and the aquatic environment. By including chlorinated solvents in this general permit, operators will be encouraged to obtain permit coverage for their discharges, and the State will have increased control over these discharges.

c. Expanded the scope of the regulation to allow discharges to waters listed as public water supplies (PWS) (see the Virginia Water Quality Standards §§ 9 VAC 25-260-390 through 9 VAC 25-260-540 for waters listed as a PWS). However, discharges within five miles

upstream of a PWS intake are not authorized by this permit. (For tidal intakes, discharges within five miles of the PWS intake -- either way -- are not authorized by this permit.)

Discharges of petroleum contaminated wastewater to surface waters listed as a source for a PWS are not allowed under the expiring general permit. The primary concern of allowing petroleum contaminated wastewater discharges to waters listed as sources for public water supplies is the perception that allowing this type of discharge is not sufficiently protective of human health. However, the Water Quality Standards for Public Water Supplies generally are more restrictive than aquatic toxicity-based values. The permit effluent limits developed for discharges to waters listed as sources for public water supplies are based upon either the Water Quality Standard for Public Water Supplies or an aquatic toxicity-based value, whichever is more restrictive.

The new general permit requires a higher monitoring frequency for discharges into surface waters listed as sources for public water supplies than the monitoring frequency required for discharges to non-public water supplies. This increased monitoring frequency will allow the permittee to identify treatment problems more quickly and take steps to correct their wastewater treatment system so that effluent limits can be maintained.

d. Added several constituents to the list of parameters to be monitored during discharge operations. These changes are based upon the increased use of ethanol and better understanding of lead scavenger compounds used in leaded gasoline.

Ethanol - Both ethanol and MTBE are additives in "reformulated" automotive gasolines (RFG). The Federal Energy Policy Act of 2005 altered the RFG program including the removal of the oxygenate mandate for RFG and set forth a national renewable fuel standard (RFS). Removal of the RFG oxygenate standard and implementation of the new RFS encouraged increased ethanol usage and discouraged MTBE usage. In the Spring of 2006, many RFG marketers in Virginia began being supplied with gasoline containing up to 10% ethanol (E10) in order to replace the MTBE. Ethanol biodegrades rapidly and is a short-lived compound in surface waters and subsurface aquifers. Human health risks from exposure to ethanol appear to be minimal, especially when compared with the risks posed by other gasoline constituents. Ethanol concentrations in discharges of petroleum products containing greater than 10% ethanol may pose risks to aquatic organisms. An effluent limit for ethanol has been added, but monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol.

Ethylene Dibromide (EDB) - Ethylene dibromide (a.k.a. 1,2 dibromoethane, CAS Number: 106-93-4) is a compound added to leaded gasoline to remove lead from the combustion chamber and prevent lead oxide and lead sulfide deposits from forming within an internal combustion engine. Lead scavengers such as EDB are persistent in groundwater and, in combination with the BTEX constituents, can be good indicators of a leaded gasoline release. EDB can persist at low concentrations within groundwater and is very toxic to humans. Based upon the toxicity and persistence of this constituent, an effluent limit for EDB has been added for discharges of water contaminated by leaded gasoline.

1,2-Dichloroethane (1,2 DCA) - 1,2-Dichloroethane (1,2 DCA, CAS Number: 107-06-20) is another compound commonly added to leaded gasoline as a lead scavenger. Like EDB, 1,2 DCA can persist at low concentrations within groundwater and is quite toxic to humans. Based upon the toxicity and persistence of this constituent, an effluent limit for 1,2 DCA has been added for discharges of water contaminated by leaded gasoline.

e. Removed the monitoring requirement for volatile organics (VOCs), semi-volatile organics (SVOCs), and dissolved metals for discharges of water contaminated by used oil. Modified the registration statement to require the applicant to submit a characterization or description of the wastewater, or nature of the contamination, including analytical data.

Used oil may contain many types of impurities or be contaminated by solvents or other chemicals. The original purpose for evaluating VOCs, SVOCs, and dissolved metals under this general permit was to determine if the wastewater at a site was a hazardous waste. Based on an evaluation of this monitoring requirement, it is believed that this data is not needed as part of an ongoing monitoring regime. An analysis of the wastewater for these constituents must be made prior to any discharge to determine if coverage under this general permit is appropriate. The Registration Statement has been modified to require the applicant to submit these analyses as part of the permit registration process so that staff may determine if the discharge is eligible to receive coverage under this general permit.

f. Modified the existing effluent limits for total recoverable lead, xylenes, and naphthalene.

Aquatic toxicity data available through EPA are constantly updated as new studies are performed and existing data are further reviewed and evaluated. Effluent limits for xylenes and naphthalene in the current permit have been amended to reflect aquatic toxicology data that were not available during the last reissuance of this general permit regulation. The effluent limit for total recoverable lead has been modified to reflect the revised Water Quality Standard for lead. The new limit is:

$$\text{Total recoverable lead} = e^{(1.273(\ln \text{ hardness})) - 3.259}$$

April 2008 Corrections to the Regulation and General Permit

This regulation was adopted by the Water Control Board on December 4, 2007. Subsequent to the adoption, errors were found in Section 9 VAC 25-120-80 (General Permit) in the eight Part I.A (Effluent Limitations and Monitoring Requirements) tables, and in the Part II.K.1(ii) (Signatory Requirements) section. The errors and the corrections are as follows:

a. Part I.A, Tables 1-8 - Method Corrections: EPA updated the 40 CFR Part 136 Test Procedures rule on March 12, 2007. They also published the "Final Update IV" to the Third Edition of the manual, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA publication SW-846, on January 3, 2008. These updates contain new and revised analytical methods for some of the methods specified in this regulation. To conform to the federal methods changes, all references in these tables to "*40 CFR Part 136 (1996)*" were changed to "*40 CFR Part 136 (2007)*". References in these tables to EPA SW 846 "*(1996)*" or "*(1998)*" were changed to the correct year the method was published/updated.

b. Part I.A, Tables 1-8 - Specific Method Corrections: In the Part I.A tables 1-8, wherever the following methods appear, they were changed as follows:

- EPA SW 846 method *9040B* changed to *9040C*
- EPA SW 846 method *8015B* changed to *8015C*
- EPA SW 846 method *8270C* changed to *8270D*
- EPA SW 846 method *7421* changed to *7010*
- EPA Part 136 method *239.2* changed to "*200.8 or 200.9*"

c. Part II.K.1(ii) - Correction: An old version of this language was in the permit. The language for this subsection was changed in the VPDES Permit Regulation (9 VAC 25-31-110.A.1) several years ago based upon EPA's changes to the 40 CFR Part 122.22 language

that were published by EPA on May 15, 2000. The correct language for this subsection is: *"(ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;"*.

3. Activities Covered by this General Permit

This general permit covers point source discharges of petroleum or chlorinated hydrocarbon contaminated water from a variety of activities including excavation dewatering, purging groundwater monitoring wells, aquifer testing to characterize site conditions, groundwater pumping, and other cleanup activities approved by DEQ. This permit also can be used to cover the hydrostatic testing of petroleum and natural gas storage tanks, petroleum and natural gas pipelines, and underground and above ground storage tanks. The limits of this permit are intended to address discharges of petroleum contaminated water, discharges of hydrostatic test water from petroleum and natural gas pipelines and storage tanks, and discharges of chlorinated hydrocarbon contaminated wastewater. Additional information about the permit effluent limits may be found in the General Permit Fact Sheet (see Attachment 2). Discharges not associated with petroleum or chlorinated hydrocarbon contaminated water or hydrostatic tests of natural gas or petroleum pipelines and storage tanks are not authorized under this permit.

4. Registration Statement Review

Persons seeking coverage under this permit must submit a Registration Statement to the appropriate DEQ regional office. There is no application fee to apply for coverage under this permit. The Registration Statement and instructions are included with this guidance as Attachment 4. The Registration Statement has changed slightly for this reissuance. The major change is the addition of item 8, which requires the applicant to submit a characterization or description of the wastewater or nature of contamination, including analytical data. Permittees may not use registration statements from previous general permit cycles to apply for coverage under this general permit.

Attachment 5 contains an example transmittal letter that may be sent to prospective permittees, along with the Registration Statement and instructions. Staff may modify this transmittal letter as needed, however, the required elements should be included in each transmittal letter.

The Regional Water Permit, Remediation, and Waste Permitting staff should collaborate and coordinate the VAG83 permit processing, CEDS data management, and file management tasks.

Regional staff will review registration statements submitted by applicants to determine if coverage may be granted under this permit. The evaluation checklist (see Attachment 8) can be used to determine if the discharge qualifies for coverage. Staff should consider the guidelines discussed below when reviewing registration statements.

Once a permitting determination has been made, the regional staff should either issue permit coverage, or respond to the applicant that the discharge does not qualify for coverage.

Treatment processes involving chlorinated hydrocarbon solvents may generate hazardous wastes. Such scenarios should be communicated to the Waste staff to facilitate coordination of potential Waste regulatory requirements that may extend beyond the VAG83 general permit coverage.

The Regional staff (the Remediation and/or the Water Permits staff) may also need the assistance of the Hazardous Waste - RCRA Subtitle C staff, or the VRP staff in the review of some registration statements before coverage is granted.

Registration Review Guidelines:

Questions 1 – 3 Facility and Owner Information

These questions provide information about the applicant and the discharge location. Addresses and phone numbers are needed for both the facility where the discharge will take place and the operator of that facility if their address is different than the location at which the discharge will take place.

Question 4 Nature of the Business conducted at the facility.

The applicant should briefly describe the type of business that usually is conducted at the facility where the discharge will take place.

Question 5 Type of Petroleum Product or Hydrocarbon Solvents

Effluent limits are based upon the nature of the receiving waters (fresh or saltwater) and the type(s) of material(s) that contaminated the water at the site. Where the water was contaminated by petroleum products, the applicant needs to indicate the types of petroleum products contributing to the water contamination (e.g., gasoline, diesel, #4 fuel oil). If the water was contaminated by chlorinated hydrocarbons, not petroleum products, the applicant must indicate the types of chlorinated hydrocarbons present in the water.

Question 6 Proposed Discharge Activities

The applicant should identify all of the potential sources of wastewater discharges at the site. Since each activity is considered a separate outfall, it is important to identify them individually when the permit coverage is requested. Otherwise, the permittee will have to re-submit the registration statement in order to obtain coverage for activities not listed on the original registration statement. For example, if discharges will occur from both an aquifer pump test and the long-term recovery of groundwater as part of remediation system, then both of these activities should be checked on the registration statement. Permit writers also may confirm the activities listed on the registration statement with the applicant prior to processing the registration statement.

Question 7 Site Characterization Report

This question is specifically for petroleum contaminated sites, and asks if a Site Characterization Report (SCR) has been submitted for the site. The SCR provides a cross reference to potential ongoing remedial actions at the site. If an SCR has been submitted, the permit writer may wish to review the SCR before processing the registration statement to ensure that the permit coverage requested is likely to address all of the anticipated discharge activities at the site.

Question 8 Characterization or Nature of Wastewater Contamination Including Analytical Data

Applicants for this general permit need to inform DEQ of the type of discharge that will take place and the contaminants present in the wastewater. Persons having discharges of petroleum-contaminated wastewater need to inform staff of the type(s) of petroleum product(s) to be discharged so that the appropriate effluent limits may be assigned to the discharge. If the water has been contaminated by used oil, the applicant should provide analytical data for dissolved volatile organic compounds, semi-volatile organic compounds, and metals. If the discharge involves chlorinated hydrocarbons, the applicant should provide analytical data showing the

constituents present in the raw wastewater (i.e., untreated wastewater). If chlorinated hydrocarbons other than, or in addition to, those having effluent limits listed in this permit regulation are present in the raw wastewater, staff should not use this general permit to authorize the discharge.

The addition of discharges contaminated by chlorinated hydrocarbon solvents is the most significant change to this general permit. Petroleum contaminated discharges are usually supported by a site characterization (analytical data) required by the UST Technical Regulation, or a Phase 2 Environmental Assessment required by a real estate transfer. For discharges contaminated by chlorinated hydrocarbon solvents, there is no one regulation in place to assure the routine availability of a site characterization. There are various laws and regulations in place such as CERCLA, RCRA, and the Virginia VRP program that may enable a site characterization to be available for a site proposing a solvent discharge. When inadequate information is submitted by an applicant for a proposed solvent discharge, the staff may need to direct the applicant to other remediation programs for site characterization and cleanup, if appropriate.

If the situation is such that there is no program in place to oversee a site characterization and cleanup, staff may have to rely on the analytical data provided, or may have to request additional analytical data to that which is provided with the registration statement. Staff may request that the applicant submit additional analytical data, but there is no regulation that would require more sampling if the applicant refuses.

For example, if we receive a request for general permit coverage where the site has solvents, and the justification is based on one sample located very far from the probable source, we can request that they provide appropriate sampling data. If the applicant does not agree to do this, then staff would have to decide if the data submitted was sufficient to justify issuing the general permit coverage. If not, then we would deny general permit coverage.

The basis we could use to deny general permit coverage would be: (1) if inadequate information was submitted to determine if coverage under the permit is appropriate; or (2) the presence of constituents in the discharge which are not authorized under the general permit (e.g., acetone).

Question 9 Discharge Location

This question requires the applicant to provide information about the discharge location. Since the scope of the regulation has been expanded to allow discharges to waters listed as a public water supply (PWS), the permit writer should consult the Water Quality Standards §§ 9 VAC 25-260-390 through 9 VAC 25-260-540 to determine if the water is listed as a PWS. Discharges within five miles upstream of a PWS intake are not authorized by this permit. (For tidal intakes, discharges within five miles of the PWS intake -- either way -- are not authorized by this permit.)

There are other waters listed in the Water Quality Standards (§ 9 VAC 25-260-310) that have restrictions/prohibitions on discharges. This section should be reviewed prior to issuing permit coverage.

The Water Quality Standards also provide information about the fresh or saltwater classification of the receiving water body. If the receiving water body is listed in the Standards as freshwater, the effluent limits for freshwater apply. Conversely, if the receiving waters are saltwater, the saltwater limits apply. If the discharge is into a transition zone, use the effluent limits for freshwater discharges.

Questions 10-13 Discharge Information

The answers to these questions provide information about the expected frequency, volume, flow

rate, and duration of the discharge.

Question 14 Diagram of the Proposed Wastewater Treatment System

There are no specific requirements for the system diagram. The diagram of the system may be as simple as a line drawing or flowchart or it may be detailed engineering plans. In all cases, enough information must be provided to allow the permit writer to determine if the proposed system is likely to treat the wastewater to the point that the effluent can meet the discharge limits. If the permit writer believes that the information is insufficient or the treatment system is unlikely to produce an effluent that can meet the permit limits, permit coverage should be denied.

Question 15 Topographic Map

This map will help the permit writer to determine the potential for adverse impact to public water supplies or other protected water bodies.

Question 16 Availability of a Central Wastewater Treatment Facility

This question asks if central wastewater treatment facilities are available and, if so, what is the possibility of discharging to the central wastewater treatment facility. Proposed discharges in locations that are not served by or have access to central sewer lines may be granted coverage under this permit. If a central sewer line is available but the operator of the wastewater treatment facility has denied the applicant access to the sewer, coverage may be granted under the permit.

Generally, persons having the option of discharging to a central wastewater treatment facility should send the effluent to the central wastewater treatment facility and not be issued coverage under this permit. The general permit should not be used as a means of encouraging a proliferation of surface water discharges. Permit writers need to be cognizant, however, that the costs associated with discharging petroleum-contaminated water may, at many sites, be reimbursable from the Virginia Petroleum Storage Tank Fund and DEQ has a responsibility to ensure that the fund provides reimbursement for activities that are necessary for corrective action at the site. At those sites that are eligible for reimbursement from the fund, staff may consider the relative costs associated with discharging to a central wastewater treatment facility versus the costs associated with the general permit and use the cost differential as a basis for justifying the issuance of coverage under the general permit.

Questions 17 and 18 Pollution Complaints and Permits at the Site

These questions are used to relate the proposed discharge to other activities under DEQ's oversight at the facility. If a facility already has an existing VPDES permit, consideration should be given to expanding the existing permit to include this proposed discharge.

Question 19 Hazardous Waste

This question asks if the discharged material may be classified as a hazardous waste. If the answer is "yes", the situation should be communicated to the Waste staff to facilitate coordination of potential Waste regulatory requirements that may extend beyond the VAG83 GP coverage.

Certification

The applicant must sign and date the certification section provided on the registration statement.

All registration statements must be signed in accordance with the permit section Part II.K - Signatory Requirements.

There are many cases where a consultant has signed the registration statement, and this is okay.

Unlike the tank regulations where the tank owner and operator are the responsible persons (RP), the VPDES regulations apply to the operator of the treatment facility. The RP can be an operator of the treatment facility, but so can the consultant. If the consultant signs the registration statement, they are the one responsible for meeting the requirements of the permit.

Required Attachments

The following attachments should be included with the Registration Statement:

- Wastewater Characterization Analytical Data
- Treatment Works Design Schematic Drawing
- Topographic Map

DEQ Box For Stream Basin, Class, Section, and Special Standards Information

After the Required Attachments list, there is a box for DEQ use only. The permit writer should fill in information on stream basin, class, section, and special standards in order to ensure that discharges are not being allowed into waters where such discharges are prohibited.

5. Permit Processing Guidelines

a. Antibacksliding

If the applicant previously held an individual permit at the site, anti-backsliding must be considered prior to granting coverage under this general permit. Backsliding should be evaluated on a case-by-case basis in accordance with the VPDES Permit Regulation (9 VAC 25-31-220.L).

In the case of new or increased discharges at a facility already covered by the general permit, a determination has already been made that such discharges will not result in significant effects to receiving waters. Therefore, permit writers do not have to conduct a case-by-case antidegradation review for new or increased discharges.

b. General Permit Pages

Once it is determined that the registration statement represents a facility that qualifies for coverage, the general permit pages may be prepared. The general permit pages are included with this guidance as Attachment 3, and are also available on DEQNet.

The cover page, printed on agency letterhead, appropriate Part I.A effluent limits pages (make sure all the outfalls are covered), Part I.B special conditions, and Part II permit boilerplate should be assembled. Please note that the permit number must be added to the permit pages, including the cover page, before the permit is mailed to the permittee. For existing permitted facilities, the permit number will be the same one that was used for the previous issuance. For new facilities, the permit number will be generated by CEDS when the facility is entered into the system. The appropriate outfall number must be added at the end of the first sentence on each Part I.A effluent limits page. Each discharge activity proposed for the site should be assigned a separate outfall number so that the Discharge Monitoring Reports (DMRs) can be properly developed. More than one outfall number may be listed on the applicable limitations page. Remember to do a final Part I page count and correct the Part I page numbers if necessary. The pages of Part II are already numbered. No other changes to the language of the general permit are authorized.

c. DMRs

The general permit requires 1/month, 2/month, and (potentially) 1/quarter monitoring, and

monthly reporting. DMRs are necessary for reporting and compliance tracking. All outfalls described in the registration statement should be listed on the effluent limits page and on the DMR, so that there is indication in the permit of what outfalls require sampling. Each outfall is required to have a separate DMR.

DMRs should be generated using CEDS, and should include the applicable limitations and monitoring requirements that reflect the Part I A page(s) assigned to each outfall. If the contamination at the site involves leaded gasoline, then the DMR must include lead, hardness, ethylene dibromide, and 1,2 dichloroethane. Otherwise, these parameters should be deleted from the CEDS limits page. If gasoline containing greater than ten percent ethanol contributed to contamination at the site, then the DMR must include ethanol. Otherwise, it should be deleted from the CEDS limits page. Staff should be aware that discharges to surface waters listed as public water supply sources have different effluent limits than surface waters not listed as public water supply sources.

Constituents listed on DMRs for water contaminated by petroleum products other than gasoline also vary depending upon whether the receiving stream is listed as a public water supply. Methyl tertiary butyl ether (MTBE) and benzene must be on these DMRs when the water will be discharged to a listed public water supply source.

d. Transmittal Letter

Once the DMRs are ready, staff should send a transmittal letter, the DMRs, and a copy of the permit to the permittee. Staff also should keep a copy of these documents for the regional file. Do not copy DEQ Central Office or EPA on individual coverage issued under the general permit. An example transmittal letter that staff may use is attached. Staff may modify the transmittal letter as needed to address site conditions. A list of items that need to be addressed in all transmittal letters is attached. If the permit coverage is issued before the April corrections become effective on June 11th, be sure to include the additional language shown in brackets in the letter.

Permit writers should note that the transmittal letter for coverage under a general permit does not contain the two paragraphs referencing the owner's right to appeal the decision to cover them under the permit.

e. Reporting

DMRs must be submitted monthly, regardless of whether the facility has a discharge or not. DMRs are due on the tenth of the month following the monitoring period. Tracking of compliance with the limits and other requirements of the general permit should be done according to the Compliance Auditing System already established for VPDES Permits. Reporting requirements for noncompliance, unusual or extraordinary discharges, etc. are the same as for an individual permit.

Electronic DMR (e-DMR) reporting is not available yet for this general permit. If/when this option becomes available, we will send an information package to the registered permittees inviting them to participate in the program.

f. Reduced Monitoring

Facilities with petroleum or chlorinated hydrocarbon contaminated discharges to waters listed as public water supply sources may qualify for reduced monitoring. For the first year of permit coverage, these facilities must monitor the effluent twice per month. After the first year of coverage (twelve DMR submittals), if the first year monitoring results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced to once per month. The written request should be sent to the

appropriate regional office for review. This request should be granted only when there have been no effluent limit violations from this discharge. The regional office should send written notification of the approval or denial of the request. If the request is approved, the approval letter should be accompanied by revised DMRs, and CEDS should be updated to reflect the reduced sampling frequencies.

Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, the monitoring frequency for all parameters will revert back to twice per month upon issuance of the letter or notice or initiation of the enforcement action, and will remain in effect until the permit's expiration date. If this happens, the regional office should send written notification to the permittee, the letter should be accompanied by revised DMRs, and CEDS should be updated to reflect the twice per month sampling frequencies.

Facilities monitoring for ethanol may also qualify for reduced monitoring. For the first year of permit coverage, these facilities must monitor the effluent either once per month or twice per month (depending on where they discharge). After the first year of coverage (twelve DMR submittals), if the first year monitoring results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced to once per quarter. The written request should be sent to the appropriate regional office for review. This request should be granted only when there have been no effluent limit violations from this discharge. The regional office should send written notification of the approval or denial of the request. If the request is approved, the approval letter should be accompanied by revised DMRs, and CEDS should be updated to reflect the reduced sampling frequencies.

Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, the monitoring frequency for all parameters will revert back to the original permit monitoring frequency upon issuance of the letter or notice or initiation of the enforcement action, and will remain in effect until the permit's expiration date. If this happens, the regional office should send written notification to the permittee, the letter should be accompanied by revised DMRs, and CEDS should be updated to reflect the original sampling frequencies.

g. Permit Tracking

Tracking of coverage under this general permit will be performed in CEDS. Hard copy files of discharges covered under this permit should contain a copy of the registration statement, general permit and DMRs sent to the owner, transmittal letter, and any inspection reports. It is important that the CEDS database is kept updated with the list of permittees and contact information, their permit numbers, and the effluent limits pages that are applicable to each permittee.

h. Termination of Coverage For Some or All Activities

The permit allows the permittee to request termination of coverage for some or all of the activities identified on the registration statement. Termination of coverage for activities that no longer discharge to the environment will relieve the permittee of the responsibility for filing DMRs for outfalls that no longer are active. The termination request for inactive outfalls should be processed as a minor modification of the permit. The Regional Office should send a confirmation to the permittee that his/her request to terminate coverage for specific outfalls has been granted. A copy of that confirmation should be sent to the Compliance Auditor, so that the reporting requirement for that outfall can be deleted from the

tracking system. The information in CEDS also should be updated to reflect this change in status. Permittees who wish to add outfalls for activities not identified on the original registration statement should file amended registration statements and be issued new DMRs for the new outfalls. These new outfalls should be recorded in the compliance tracking and CEDS databases. A form that permittees may use to request termination of coverage for individual outfalls or all discharges is included as Attachment 6, and is also on DEQNet.

i. Change of Ownership

If there is a request for a change of ownership, then the new owner assumes the coverage under the general permit and the permit number does not change. The new owner may submit a new registration statement, but it is not necessary. Part II.Y of the permit allows for the automatic transfer of ownership if the 30 day prior notice and the required written agreement between the new and old owners are provided. The other change of ownership requirements and procedures from the VPDES Permit Regulation and the VPDES Permit Manual that are common to all VPDES permits apply here as well. Any change of status should be noted in CEDS. A change of ownership form that may be used to transfer permit coverage from one entity to another is included as Attachment 7, and is also on DEQNet.

j. Inspection Strategy

Facilities covered under the general permit are subject to the inspection strategy in the industrial minor/small category. These facilities should be inspected at least once every five years. The inspectors should check for compliance with the technical aspects of the permit, including but not limited to the presence of an O&M manual, and for overflows, by-passes, and other indications of a failed system. Also, the inspector should review the DMR data to determine whether the facility has been submitting representative data in accordance with the monitoring, analytical and reporting requirements of the general permit.

k. Reapplication

The permittee must submit a new registration statement within 180 days prior to the expiration of this general permit if continued coverage is desired. Since this date will be the same for all those covered by the permit, any reminder letters sent out would be a mass mailing of some kind. DEQ Central Office Water Permits staff will provide further guidance when the permit nears expiration.

Attachments:

1. Regulation
2. Fact Sheet
3. General Permit
4. Registration Statement and Instructions
5. Letter Requirements and Example Letters
6. Termination of Coverage Request
7. Transfer of Ownership Agreement
8. Registration Statement Evaluation Checklist

Attachment 1

**GENERAL VPDES PERMIT REGULATION FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDIATION, AND HYDROSTATIC TESTS (9 VAC 25-120)**

9VAC25-120 - GENERAL VIRGINIA POLLUTANT DISCHARGE ELIMINATION SYSTEM (VPDES) PERMIT REGULATION FOR DISCHARGES FROM PETROLEUM CONTAMINATED SITES, GROUNDWATER REMEDIATION AND HYDROSTATIC TESTS

[Adopted: December 4, 2007; Effective: February 6, 2008]

NOTE: There are corrections shown in this version of the regulation to the eight Permit Part I.A pages (Effluent Limitations and Monitoring Requirements) and to the Permit Part II.K.1.a(ii) section (Signature Requirements). These changes are not final and are shown for informational purposes only. The corrections were adopted by the State Water Control Board on April 10, will be published in the Virginia Register on May 12, and are expected to become effective on June 11, 2008.

9VAC25-120-10. Definitions.

The words and terms used in this chapter shall have the meanings defined in the State Water Control Law and 9VAC25-31 (VPDES permit regulation) unless the context clearly indicates otherwise, except that for the purposes of this chapter:

"Central wastewater treatment facilities" means any facility that treats (for disposal, recycling, or recovery of materials) or recycles hazardous or nonhazardous waste, hazardous or nonhazardous industrial wastewater, or used material from offsite. This includes both a facility that treats waste received from off-site exclusively, and a facility that treats waste generated on-site as well as waste received from off site.

"Chlorinated hydrocarbon solvents" means solvents containing carbon, hydrogen, and chlorine atoms and the constituents resulting from the degradation of these chlorinated hydrocarbon solvents.

"Petroleum products" means petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils. "Petroleum products" does not include hazardous waste as defined by the Virginia Hazardous Waste Regulations (9VAC20-60).

9VAC25-120-20. Purpose.

This general permit regulation governs the discharge of wastewaters from sites contaminated by petroleum products, chlorinated hydrocarbon solvents, and the hydrostatic testing of petroleum and natural gas storage tanks and pipelines. These wastewaters may be discharged from the following activities: excavation dewatering, purging groundwater monitoring wells, conducting aquifer tests to characterize site conditions, hydrostatic tests of natural gas and petroleum storage tanks or pipelines, hydrostatic tests of underground and above ground storage tanks, pumping contaminated groundwater to remove free product from the ground, or discharges resulting from another petroleum product or chlorinated hydrocarbon solvent cleanup activity approved by the department.

Discharges not associated with petroleum-contaminated water, water contaminated by chlorinated hydrocarbon solvents, or hydrostatic tests are not covered under this general permit.

9VAC25-120-30. [Repealed]

9VAC25-120-40. [Repealed]

9VAC25-120-50. Effective date of the permit.

This general permit will become effective on February 26, 2008. This general permit will expire five years from the effective date. This general permit is effective as to any covered owner upon compliance with all the provisions of 9VAC25-120-60 and the receipt of this general permit.

9VAC25-120-60. Authorization to discharge.

A. Any owner governed by this general permit is hereby authorized to discharge to surface waters within the Commonwealth of Virginia provided that the owner files and receives acceptance by the board of the registration statement of 9VAC25-120-70 and complies with the applicable effluent limitations and other requirements of 9VAC25-120-80, and provided that:

1. Individual permit. The owner has not been required to obtain an individual permit according to 9VAC25-31-170 B;
2. Prohibited discharge locations. The owner shall not be authorized by this general permit to discharge within five miles upstream of a public water supply intake or to state waters specifically named in other board regulations or policies which prohibit such discharges; and
3. Central wastewater treatment facilities. The owner shall not be authorized by this general permit to discharge to surface waters where there are permitted central wastewater treatment facilities reasonably available, as determined by the board.

B. Receipt of this general permit does not relieve any owner of the responsibility to comply with any other appropriate federal, state or local statute, ordinance or regulation.

9VAC25-120-70. Registration statement.

The owner shall file a complete VPDES general permit registration statement for discharges from petroleum contaminated sites, ground water remediation, and hydrostatic tests. Any owner proposing a new discharge shall file a complete registration statement at least 30 days prior to the date planned for commencing operation of the new discharge. Any owner of an existing discharge covered by an individual VPDES permit who is proposing to be covered by this general permit shall file the registration statement at least 180 days prior to the expiration date of the individual VPDES permit. Any owner of an existing discharge not currently covered by a VPDES permit who is proposing to be covered by this general permit shall file a complete registration statement. The required registration statement shall contain the following information:

1. Legal name of facility;
2. Location of facility, address, and telephone number;
3. Facility owner name, address, and telephone number;
4. Nature of business conducted at the facility;
5. Type of petroleum or natural gas products causing or that caused the contamination;
6. Identification of activities that will result in a point source discharge from the contaminated site;
7. Whether a site characterization report for the site has been submitted to the Department of Environmental Quality;
8. Characterization or description of the wastewater or nature of contamination including analytical data;
9. The location of the discharge point and identification of the waterbody into which the discharge will occur;
10. The frequency with which the discharge will occur (i.e., daily, monthly, continuously);
11. An estimate of how long each discharge will last;
12. An estimate of the total volume of wastewater to be discharged;

13. An estimate of the flow rate of the discharge;
14. A diagram of the proposed wastewater treatment system identifying the individual treatment units;
15. A topographic map or other map that indicates the receiving waterbody name, the discharge point or points, the property boundaries, as well as springs, other surface waterbodies, drinking water wells, and public water supplies that are identified in the public record or are otherwise known to the applicant within a 1/2 mile radius of the proposed discharge or discharges.
16. Whether central wastewater facilities are available to the site, and if so, whether the option of discharging to the central wastewater facility has been evaluated and the results of that evaluation;
17. Whether the facility currently has a permit issued by the board, and if so, the permit number;
18. Any applicable pollution complaint number;
19. A statement as to whether the material being treated or discharged is certified as a hazardous waste under the Virginia Hazardous Waste Regulation (9VAC20-60);
20. The following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I do also hereby grant duly authorized agents of the Department of Environmental Quality, upon presentation of credentials, permission to enter the property for the purpose of determining the suitability of the general permit.

The registration statement shall be signed in accordance with 9VAC25-31-110.

9VAC25-120-80. General permit.

Any owner whose request for coverage under this general permit is accepted by the board shall comply with the requirements of the general permit and be subject to all requirements of 9VAC25-31-170 B of the VPDES permit regulation. Not all pages of Part I A of the general permit will apply to every permittee. The determination of which pages apply will be based on the type of contamination at the individual site and the nature of the waters receiving the discharge. Part I B and all pages of Part II apply to all permittees.

General Permit No.: VAG83

Effective Date: February 26, 2008

Expiration Date: February 25, 2013

GENERAL VPDES PERMIT FOR DISCHARGES FROM PETROLEUM CONTAMINATED
SITES, GROUNDWATER REMEDIATION, AND HYDROSTATIC TESTS

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE
ELIMINATION SYSTEM PERMIT PROGRAM AND THE VIRGINIA STATE WATER CONTROL
LAW

In compliance with the provisions of the Clean Water Act, as amended, the State Water Control Law and regulations adopted pursuant thereto, the owner is authorized to discharge to surface waters at

the locations identified in the accepted registration statement within the boundaries of the Commonwealth of Virginia, except to designated public water supplies or waters specifically named in other board regulations or policies which prohibit such discharges.

The authorized discharge shall be in accordance with this cover page, Part I - Effluent Limitations and Monitoring Requirements and Part II - Conditions Applicable to All VPDES Permits, as set forth herein.

If there is any conflict between the requirements of a Department of Environmental Quality approved cleanup plan and this permit, the requirements of this permit shall govern.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

1. GASOLINE CONTAMINATION -- FRESHWATER RECEIVING WATERS NOT LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Benzene (µg/l) ¹	NA	50.0	1/Month	Grab
Toluene (µg/l) ¹	NA	175.0	1/Month	Grab
Ethylbenzene (µg/l) ¹	NA	320.0	1/Month	Grab
Total Xylenes (µg/l) ¹	NA	33.0	1/Month	Grab
MTBE (methyl tert-butyl ether) (µg/l) ¹	NA	1,840.0	1/Month	Grab
pH (standard units)	6.0	9.0	1/Month	Grab
Total Recoverable Lead (µg/l) ²	NA	$e^{(1.273(\ln \text{ hardness})) - 3.259}$	1/Month	Grab
Hardness (mg/l CaCO ₃) ²	NL	NA	1/Month	Grab
Ethylene Dibromide (µg/l) ²	NA	5.3	1/Month	Grab
1,2 Dichloroethane (µg/l) ²	NA	990.0	1/Month	Grab
Ethanol (µg/l) ³	NA	4100.0	1/Month	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ [2007](#)) or EPA SW 846 Method 8021B (~~1998~~ [1996](#)).

²Monitoring for this parameter is required only when contamination results from leaded fuel. Lead shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ [2007](#))

or EPA SW 846 method ~~9040B~~ 9040C. The minimum hardness concentration that will be used to determine the lead effluent limit is 25 mg/l. 1,2 dichloroethane and EDB shall be analyzed by a current and appropriate EPA SW 846 Method or EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007).

³Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol. Ethanol shall be analyzed according to EPA SW 846 Method ~~8045B~~ 8015C or EPA SW 846 Method 8260B. Monitoring frequency shall be 1/month in the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency for ethanol be reduced from monthly to 1/quarter. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/quarter. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency for ethanol shall revert to 1/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date. Reports of quarterly monitoring shall be submitted to the DEQ regional office no later than the 10th day of April, July, October and January.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

2. GASOLINE CONTAMINATION -- FRESHWATER RECEIVING WATERS LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	2/Month ⁴	Estimate
Benzene (µg/l) ¹	NA	12.0	2/Month ⁴	Grab
Toluene (µg/l) ¹	NA	175.0	2/Month ⁴	Grab
Ethylbenzene (µg/l) ¹	NA	320.0	2/Month ⁴	Grab
Total Xylenes (µg/l) ¹	NA	33.0	2/Month ⁴	Grab
MTBE (methyl tert-butyl ether) (µg/l) ¹	NA	15.0	2/Month ⁴	Grab
pH (standard units)	6.0	9.0	2/Month ⁴	Grab
Total Recoverable Lead (µg/l) ²	NA	Lower of $e^{(1.273(\ln \text{hardness})) - 3.259}$ or 15	2/Month ⁴	Grab
Hardness (mg/l CaCO ₃) ²	NL	NL	2/Month ⁴	Grab
Ethylene Dibromide (µg/l) ²	NA	.169	2/Month ⁴	Grab
1,2 Dichloroethane (µg/l) ²	NA	3.8	2/Month ⁴	Grab
Ethanol (µg/l) ³	NA	4100.0	2/Month ⁵	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE shall be analyzed according to a current and appropriate EPA Method (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method 8021B (~~1998~~ 1996).

²Monitoring for this parameter is required only when contamination results from leaded fuel. Lead shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ 2007). The minimum hardness concentration that will be used to determine the lead effluent limit is 25 mg/l. EPA SW 846 Method 8011 or EPA Drinking Water Method 504.1 shall be used to analyze ethylene dibromide (EDB) in wastewaters discharged to public water supplies. 1,2 dichloroethane shall be analyzed by a current and appropriate EPA SW 846 Method or EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007).

³Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol. Ethanol shall be analyzed according to EPA SW 846 Method ~~8015B~~ 8015C or EPA SW 846 Method 8260B.

⁴Monitoring frequency shall be 2/month for the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from 2/month to 1/month. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/month. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date.

⁵If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency for ethanol be reduced from 2/month to 1/quarter. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/quarter. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date. Reports of quarterly monitoring shall be submitted to the DEQ regional office no later than the 10th day of April, July, October, and January.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

3. CONTAMINATION BY PETROLEUM PRODUCTS OTHER THAN GASOLINE -- FRESHWATER RECEIVING WATERS NOT LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Naphthalene (µg/l) ¹	NA	10.0	1/Month	Grab *
Total Petroleum Hydrocarbons (mg/l) ²	NA	15.0	1/Month	Grab **

pH (standard units)	6.0	9.0	1/Month	Grab
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NL = No Limitation, monitoring required

NA = Not Applicable

¹ Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007) or a current and appropriate EPA SW 846 Method.

² TPH shall be analyzed using EPA SW 846 Method ~~8015B~~ 8015C for diesel range organics, or by EPA SW 846 Method ~~8270C~~ 8270D. If method ~~8270C~~ 8270D is used, the lab must report the total of diesel range organics and polynuclear aromatic hydrocarbons.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

4. CONTAMINATION BY PETROLEUM PRODUCTS OTHER THAN GASOLINE -- FRESHWATER RECEIVING WATERS LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	2/Month ⁴	Estimate
Naphthalene (µg/l) ¹	NA	10.0	2/Month ⁴	Grab
Benzene (µg/l) ²	NA	12.0	2/Month ⁴	Grab
MTBE (methyl tert-butyl ether)(µg/l) ²	NA	15.0	2/Month ⁴	Grab
Total Petroleum Hydrocarbons (mg/l) ³	NA	15.0	2/Month ⁴	Grab
pH (standard units)	6.0	9.0	2/Month ⁴	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007) or a current and appropriate EPA SW 846 Method.

²Benzene and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method.

³TPH shall be analyzed using EPA SW 846 Method ~~8015B~~ 8015C for diesel range organics, or by EPA SW 846 Method ~~8270C~~ 8270D. If Method ~~8270C~~ 8270D is used, the lab must report the total of diesel range organics and polynuclear aromatic hydrocarbons.

⁴Monitoring frequency shall be 2/month for the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from 2/month to 1/month. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/month. Should the permittee be issued a warning letter related to violation of

effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. DISCHARGES OF HYDROSTATIC TEST WATERS -- ALL RECEIVING WATERS

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: Outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/discharge	Estimate
pH (standard units)	6.0	9.0	1/discharge	Grab
Total Petroleum Hydrocarbons (TPH, mg/l) ¹	NA	15.0	1/discharge	Grab
Total Organic Carbon (TOC, mg/l)	NA	NL	1/discharge	Grab
Total Residual Chlorine (TRC, mg/l)	NA	0.011	1/discharge	Grab
Total Suspended Solids (TSS)	NA	NL	1/discharge	Grab

NL = No Limitation, monitoring required

NA = Not Applicable

¹ TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method ~~8015B~~ 8015C (~~1996~~ 2007) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B and ~~8270C~~ 8270D. If the combination of Methods 8260B and ~~8270C~~ 8270D is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

6. GASOLINE CONTAMINATION—SALTWATER RECEIVING WATERS.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to saltwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS
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	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Benzene (µg/l) ¹	NA	50.0	1/Month	Grab
Toluene (µg/l) ¹	NA	500.0	1/Month	Grab
Ethylbenzene (µg/l) ¹	NA	4.3	1/Month	Grab
Total Xylenes (µg/l) ¹	NA	74.0	1/Month	Grab
MTBE (methyl tert-butyl ether) (µg/l) ¹	NA	440.0	1/Month	Grab
pH (standard units)	6.0	9.0	1/Month	Grab
Total Recoverable Lead (µg/l) ²	NA	8.5	1/Month	Grab
Ethylene Dibromide (µg/l) ²	NA	5.3	1/Month	Grab
1,2 Dichloroethane (µg/l) ²	NA	990.0	1/Month	Grab
Ethanol (µg/l) ³	NA	4100.0	1/Month ³	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹ Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method 602 (40 CFR Part 136, ~~1996~~ [2007](#)) or EPA SW 846 Method 8021B (~~1998~~ [1996](#)).

² Monitoring for this parameter is required only when contamination results from leaded fuel. Lead shall be analyzed according to a current and appropriate EPA Wastewater Method ~~239.2~~ [200.8 or 200.9](#) (40 CFR Part 136, ~~1996~~ [2007](#)) or EPA SW 846 Method ~~7424~~ [7010](#) (~~1998~~ [2007](#)). 1,2 dichloroethane and EDB (surface waters that are not public water supplies) should be analyzed by a current and appropriate EPA SW 846 Method or EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ [2007](#)).

³Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol. Ethanol shall be analyzed according to EPA SW 846 Method ~~8015B~~ [8015C](#) or EPA SW 846 Method 8260B. Monitoring frequency shall be 1/month in the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from monthly to 1/quarter. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/quarter. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 1/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date. Reports of quarterly monitoring shall be submitted to the DEQ regional office no later than the 10th day of April, July, October and January.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

7. CONTAMINATION BY PETROLEUM PRODUCTS OTHER THAN GASOLINE -- SALTWATER RECEIVING WATERS.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to saltwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Naphthalene (µg/l) ¹	NA	8.9	1/Month	Grab
Total Petroleum Hydrocarbons (mg/l) ²	NA	15.0	1/Month	Grab
pH (standard units)	6.0	9.0	1/Month	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹ Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ [2007](#)) or a current and appropriate EPA SW 846 Method.

² TPH shall be analyzed using EPA SW 846 Method ~~8015B~~ [8015C](#) for diesel range organics or EPA SW 846 Method ~~8270C~~ [8270D](#). If Method ~~8270C~~ [8270D](#) is used, the lab must report the total of diesel range organics and polynuclear aromatic hydrocarbons.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

8. CONTAMINATION BY CHLORINATED HYDROCARBON SOLVENTS -- ALL RECEIVING WATERS.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Chloroform (CAS # 67663), (µg/l) ¹	NA	100.0	1/Month 2/Month if public water supply ²	Grab Grab
1,1 Dichloroethane (CAS # 75343) (µg/l) ¹	NA	4.0	1/Month 2/Month if public water supply ²	Grab Grab
1,2 Dichloroethane (CAS # 107062) (µg/l) ¹	NA	3.8	1/Month 2/Month if public water supply ²	Grab Grab
1,1 Dichloroethylene (CAS # 75354) (µg/l) ¹	NA	7.0	1/Month 2/Month if public	Grab

			water supply ²	Grab
cis-1,2 Dichloroethylene (CAS # 159592) (µg/l) ¹	NA	70.0	1/Month 2/Month if public water supply ²	Grab Grab
trans 1,2 Dichloroethylene (CAS # 156605) (µg/l) ¹	NA	100.0	1/Month 2/Month if public water supply ²	Grab Grab
Methylene Chloride (CAS # 75092) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Tetrachloroethylene (CAS # 127184) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
1,1,1 Trichloroethane (CAS # 71556) (µg/l) ¹	NA	112.0	1/Month 2/Month if public water supply ²	Grab Grab
1,1,2 Trichloroethane (CAS # 79005) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Trichloroethylene (CAS # 79016) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Vinyl Chloride (CAS # 75014) (µg/l) ¹	NA	2.0	1/Month 2/Month if public water supply ²	Grab Grab
Carbon Tetrachloride (CAS # 56235) (µg/l) ¹	NA	2.5	1/Month 2/Month if public water supply ²	Grab Grab
1,2 Dichlorobenzene (CAS # 95501) (µg/l) ¹	NA	15.8	1/Month 2/Month if public water supply ²	Grab Grab
Chlorobenzene (CAS # 108907) (µg/l) ¹	NA	3.0	1/Month 2/Month if public water supply ²	Grab Grab
Trichlorofluoromethane (CAS # 75694) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Chloroethane (CAS # 75003) (µg/l) ¹	NA	3.6	1/Month 2/Month if public water supply ²	Grab Grab
pH (standard units)	6.0	9.0	1/Month 2/Month if public water supply ²	Grab Grab

NL = No limitation, monitoring required

NA = Not applicable

¹This constituent shall be analyzed by a current and appropriate gas chromatograph/mass spectroscopy method from EPA SW 846 or the EPA Wastewater Method series from 40 CFR Part 136 (~~1996~~ 2007).

²Monitoring frequency shall be 2/month for the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from 2/month to 1/month. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/month. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date.

Part I

B. Special conditions.

1. There shall be no discharge of floating solids or visible foam in other than trace amounts.
2. The permittee shall sample each permitted outfall each calendar month in which a discharge occurs. When no discharge occurs from an outfall during a calendar month, the discharge monitoring report for that outfall shall be submitted indicating "No Discharge."
3. O & M Manual. If the permitted discharge is through a treatment works, within 30 days of coverage under this general permit, the permittee shall develop and maintain on site, an Operations and Maintenance (O & M) Manual for the treatment works permitted herein. This manual shall detail practices and procedures which will be followed to ensure compliance with the requirements of this permit. The permittee shall operate the treatment works in accordance with the O & M Manual. The manual shall be made available to the department upon request.
4. Operation schedule. The permittee shall construct, install and begin operating the treatment works described in the registration statement prior to discharging to surface waters. The permittee shall notify the department's regional office within five days after the completion of installation and commencement of operation.
5. Materials storage. Except as expressly authorized by this permit or another permit issued by the board, no product, materials, industrial wastes, or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, or stored so as to permit a discharge of such product, materials, industrial wastes, or other wastes to state waters.
6. If the permittee discharges to surface waters through a municipal separate storm sewer system, the permittee shall, within 30 days of coverage under this general permit, notify the owner of the municipal separate storm sewer system of the existence of the discharge and provide the following information: the name and location of the facility, a contact person and telephone number; the nature of the discharge; and the number of outfalls.
7. Termination of coverage. Provided that the department agrees that the discharge covered under this general permit is no longer needed, the permittee may request termination of coverage under the general permit, for the entire facility or for specific outfalls, by submitting a request for termination of coverage. This request for termination of coverage shall be sent to the department's regional office with appropriate documentation or references to documentation already in the department's possession. Upon the permittee's receipt of the regional director's approval, coverage under this general permit will be terminated. Termination of coverage under this general permit does not relieve the permittee of responsibilities under other board regulations or directives.

Part II

Conditions Applicable To All VPDES Permits

A. Monitoring.

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will ensure accuracy of measurements.

B. Records.

1. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individuals who performed the sampling or measurements;
 - c. The dates and times analyses were performed;
 - d. The individual or individuals who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation; copies of all reports required by this permit; and records of all data used to complete the registration statement for this permit for a period of at least three years from the date of the sample, measurement, report or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the board.

C. Reporting monitoring results.

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to the department's regional office.
2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the department.
3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the department.

4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to provide information. The permittee shall furnish to the department, within a reasonable time, any information which the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters or such other information as may be necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the department upon request copies of records required to be kept by this permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized discharges. Except in compliance with this permit or another permit issued by the board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, to animal or aquatic life, to the use of such waters for domestic or industrial consumption, for recreation, or for other uses.

G. Reports of unauthorized discharges. Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F shall notify the department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after the discovery. A written report of the unauthorized discharge shall be submitted to the department within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse affects on aquatic life and the

known number of fish killed. The permittee shall reduce the report to writing and shall submit the report to the department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of noncompliance. The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health as follows:

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this subsection:

- a. Any unanticipated bypass; and
- b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within five days and shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Part II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Part II G, H and I may be made to the department's regional office. Reports may be made by telephone or by FAX. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of planned changes.

1. The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The permittee plans an alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

(1) After promulgation of standards of performance under §306 of the Clean Water Act which are applicable to such source; or

(2) After proposal of standards of performance in accordance with §306 of the Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with §306 of the Act within 120 days of their proposal;

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory requirements.

1. Registration statement. All registration statements shall be signed as follows:

a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation or (ii) ~~the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures~~ the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports. All reports required by permits, and other information requested by the board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part II K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the

company. A duly authorized representative thus may be either a named individual or any individual occupying a named position; and

c. The written authorization is submitted to the department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the department prior to or together with any reports or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under §307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under §405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall submit a new registration statement at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing permit.

N. Effect of a permit. This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State law. Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by §510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U) and "upset" (Part II V), nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Article 11 (§62.1-44.34:14 et seq.) of the State Water Control Law.

Q. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges. Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II U 2 and 3.

2. Notice.

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible, at least 10 days before the date of the bypass.

b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.

a. Bypass is prohibited, and the board may take enforcement action against a permittee for bypass, unless:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II U 2.

b. The board may approve an anticipated bypass, after considering its adverse effects, if the board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset and before an action for noncompliance is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed, contemporaneous operating logs or other relevant evidence that:

- a. An upset occurred and that the permittee can identify the cause or causes of the upset;
- b. The permitted facility was at the time being properly operated;
- c. The permittee submitted notice of the upset as required in Part II I; and
- d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The permittee shall allow the director or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of ensuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit actions. Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits.

1. Permits are not transferable to any person except after notice to the department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:

- a. The current permittee notifies the department at least 30 days in advance of the proposed transfer of the title to the facility or property;

b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

c. The board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Attachment 2

FACT SHEET

**VPDES GENERAL PERMIT FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDIATION, AND HYDROSTATIC TESTS (VAG83)**

FACT SHEET

REISSUANCE OF A GENERAL VPDES PERMIT FOR DISCHARGES FROM PETROLEUM CONTAMINATED SITES, GROUNDWATER REMEDIATION, AND HYDROSTATIC TESTS

The Virginia State Water Control Board has under consideration the reissuance of a general permit for discharges from petroleum contaminated sites, discharges from groundwater remediation, and discharges associated with hydrostatic testing. This general permit will replace the General VPDES Permit for Discharges from Petroleum Contaminated Sites and Hydrostatic Tests, VAG83, which expires February 25, 2008. Owners covered under the expiring general permit, who wish to continue to discharge under a general permit, must register for coverage under the new general permit.

Permit Number: VAG83

Name of Permittee: Any owner in the Commonwealth of Virginia agreeing to be regulated under the terms of this general permit.

Facility Location: Commonwealth of Virginia

Receiving Waters: Surface waters within the boundaries of the Commonwealth of Virginia, except waters specifically named in Board Regulations or Policies which prohibit such discharges.

On the basis of preliminary review and application of lawful standards and regulations, the State Water Control Board proposes to issue the general permit subject to certain conditions and has prepared a draft permit. The Board has determined that this category of discharges is appropriately controlled under a general permit. The category of discharges to be included involves facilities with the same or similar types of operations and the facilities discharge the same or similar types of wastes. The draft general permit requires that all covered facilities meet standard effluent limitations, conditions and monitoring requirements.

Persons may comment in writing on the proposed issuance of the general permit within 60 days from August 20, 2007. Comments should be addressed to the contact person listed below. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered by the Board.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting James Barnett at:

Virginia Department of Environmental Quality
P.O. Box 1105
Richmond, Virginia 23218
(804) 698-4289
jsbarnett@deq.virginia.gov

A public hearing will be held on this draft permit. Notice of the public hearing will be published in newspapers and in the Virginia Register. Following the public hearing comment period, the Board will make its determinations regarding the proposed issuance.

1.0 Activities Covered By This General Permit

Petroleum contamination can occur as a result of leaks from above ground or underground storage tanks, pipeline leaks, surface oil spills and poor housekeeping at facilities that handle petroleum products. When the structural integrity of storage tanks or pipelines is tested with water pressure, the water may become contaminated with petroleum products. Chlorinated hydrocarbon solvents may be released into the environment via leakage from tanks, lines, process-related equipment, and spillage during materials handling operations. For the purposes of this general permit, "petroleum products" means petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil such as motor fuels, jet

fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils. Petroleum products do not include hazardous waste as defined by the Virginia Hazardous Waste Regulations, 9 VAC 20-60. "Chlorinated hydrocarbon solvents" means solvents containing carbon, hydrogen, and chlorine atoms and the constituents resulting from the degradation of these chlorinated hydrocarbon solvents.

Contaminants may be introduced into surface waters when potable, or non-potable waters are used to hydrostatically test new or repaired petroleum or natural gas pipelines or petroleum storage tanks. These tests are commonly done in the pipeline industry and even though the events are usually sporadic in nature, they may produce a discharge significant in volume. Therefore, a general permit would adequately govern this type of activity.

This general permit will cover point source discharges of wastewaters from sites contaminated by petroleum products and chlorinated hydrocarbon solvents and also the point source discharges of hydrostatic test wastewaters resulting from the testing of petroleum and natural gas storage tanks and pipelines. These wastewaters may be discharged from the following activities: excavation dewatering, purging groundwater monitoring wells, conducting aquifer tests to characterize site conditions, hydrostatic tests of natural gas and petroleum storage tanks or pipelines, hydrostatic tests of underground and above ground storage tanks, pumping contaminated groundwater to remove free product from the ground, or discharges resulting from another petroleum product or chlorinated hydrocarbon solvent cleanup activity approved by the Department.

The effluent limits in the proposed general permit are established according to the type of petroleum product or chlorinated hydrocarbon solvent causing the contamination and the nature of the waterbody receiving the discharge. An option was being considered to allow less stringent effluent limits for small discharges that occur within a period of 72 consecutive hours, and with at least 3 years between occurrences of these discharges, but due to U.S. EPA concerns for impacts to threatened and endangered species, it was decided not to allow less stringent effluent limits for these discharges.

2.0 Proposed Effluent Limitations and Monitoring Requirements

2.1 Discharges of Water Contaminated with Gasoline

Freshwater Receiving Water Not Listed as Public Water Supply

Parameter	Limitation
Flow	No limit, monitoring required
Benzene	50.0 µg/l instantaneous max.
Toluene	175.0 µg/l instantaneous max.
Ethylbenzene	320.0 µg/l instantaneous max.
Total Xylenes	33.0 µg/l instantaneous max.
Total Recoverable Lead ¹	e ^{(1.273(ln hardness)) - 3.259}
Hardness ¹	mg/l, no limit
Ethylene Dibromide (EDB) ¹	5.3 µg/l instantaneous max.
1,2 Dichloroethane (1,2 DCA) ¹	990.0 µg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.
MTBE	1,840.0 µg/l instantaneous max.
Ethanol ²	4,100.0 µg/l instantaneous max.

¹ Monitoring this parameter is required only when contamination results from leaded fuel. The minimum hardness concentration that will be used to determine the lead effluent limit is 25 mg/l.

² Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol.

The monitoring frequency is once per month. The permittee may request in writing that the monitoring frequency for ethanol be reduced to once per quarter if monitoring results from the first year of permit coverage demonstrate full compliance with the effluent limits.

Freshwater Receiving Water Listed as a Public Water Supply

Parameter	Limitation
Flow	No limit, monitoring required
Benzene	12.0 µg/l instantaneous max.
Toluene	175.0 µg/l instantaneous max.
Ethylbenzene	320.0 µg/l instantaneous max.
Total Xylenes	33.0 µg/l instantaneous max.
Total Recoverable Lead ¹	Lower of: $e^{(1.273(\ln \text{hardness})) - 3.259}$ or 15.0 µg/l
Hardness ¹	mg/l, no limit
Ethylene Dibromide (EDB) ¹	.169 µg/l instantaneous max.
1,2 Dichloroethane (1,2 DCA) ¹	3.8 µg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.
MTBE	15.0 µg/l instantaneous max.
Ethanol ²	4,100.0 µg/l instantaneous max.

¹ Monitoring this parameter is required only when contamination results from leaded fuel. The minimum hardness concentration that will be used to determine the lead effluent limit is 25 mg/l.

² Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol.

The monitoring frequency for all constituents or parameters is twice per month for the first year. If the first year's results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency for ethanol be reduced to once per quarter and the other parameters to once per month.

Saltwater Receiving Water body

Parameter	Limitation
Flow	No limit, monitoring required
Benzene	50.0 µg/l instantaneous max.
Toluene	500.0 µg/l instantaneous max.
Ethylbenzene	4.3 µg/l instantaneous max.
Total Xylenes	74.0 µg/l instantaneous max.
Total Recoverable Lead ¹	8.5 µg/l instantaneous max.
Ethylene Dibromide (EDB) ¹	5.3 µg/l instantaneous max.
1,2 Dichloroethane (1,2 DCA) ¹	990.0 µg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.
MTBE	440.0 µg/l instantaneous max.
Ethanol ²	4,100.0 µg/l instantaneous max.

¹ Monitoring this parameter is required only when contamination results from leaded fuel. The minimum hardness concentration that will be used to determine the lead effluent limit is 25 mg/l.

² Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol.

The monitoring frequency for all parameters and constituents is once per month. The permittee may request in writing that the monitoring frequency for ethanol be reduced to once per quarter if monitoring results from the first year of permit coverage demonstrate full compliance with the effluent limits.

2.2 Discharges of Water Contaminated with Petroleum Products Other than Gasoline

Freshwater Receiving Water Not Listed as a Public Water Supply

Parameter	Limitation
Flow	No limit, monitoring required
Naphthalene	10.0 µg/l instantaneous max.

Total Petroleum Hydrocarbons	15.0 mg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.

The monitoring frequency for all parameters is once per month.

Freshwater Receiving Water Listed as a Public Water Supply

Parameter	Limitation
Flow	No limit, monitoring required
Naphthalene	10.0 µg/l instantaneous max.
Total Petroleum Hydrocarbons	15.0 mg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.
Benzene	12.0 µg/l instantaneous max.
MTBE	15.0 µg/l instantaneous max

The monitoring frequency for all parameters or constituents is twice per month for the first year. If the first year's results demonstrate full compliance with the effluent limitations, the permittee may request in writing that the monitoring frequency be reduced to once per month.

Saltwater Receiving Water body

Parameter	Limitation
Flow	No limit, monitoring required
Naphthalene	8.9 µg/l instantaneous max.
Total Petroleum Hydrocarbons	15.0 mg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.

The monitoring frequency for all parameters is once per month.

2.3 Discharges of Water from Hydrostatic Tests

All Receiving Waters

Parameter	Limitation
Flow	No limit, monitoring required
pH	6.0 to 9.0 standard units
Total Petroleum Hydrocarbons (TPH)	15.0 mg/l instantaneous max.
Total Organic Carbon (TOC)	No limit, monitoring required
Total Suspended Solids (TSS)	No limit, monitoring required
Total residual chlorine (TRC)	.011 mg/l instantaneous max.

The monitoring frequency for all parameters is once per discharge.

2.4 Discharges of Water Contaminated by Chlorinated Hydrocarbon Solvents

All Receiving Waters

Parameter	Limitation
Flow	No limit, monitoring required
chloroform	100.0 µg/l instantaneous max.
1,1 dichloroethane	4.0 µg/l instantaneous max.
1,2 dichloroethane	3.8 µg/l instantaneous max.
1,1 dichloroethylene	7.0 µg/l instantaneous max.
Cis 1,2 dichloroethylene	70.0 µg/l instantaneous max.
Trans 1,2 dichloroethylene	100.0 µg/l instantaneous max.
Methylene chloride	5.0 µg/l instantaneous max.
tetrachloroethylene	5.0 µg/l instantaneous max.
1,1,1 trichloroethane	112.0 µg/l instantaneous max.
1,1,2 trichloroethane	5.0 µg/l instantaneous max.
trichloroethylene	5.0 µg/l instantaneous max.

vinyl chloride	2.0 µg/l instantaneous max.
carbon tetrachloride	2.5 µg/l instantaneous max.
1,2 dichlorobenzene	15.8 µg/l instantaneous max.
chlorobenzene	3.0 µg/l instantaneous max.
trichlorofluoromethane	5.0 µg/l instantaneous max.
chloroethane	3.6 µg/l instantaneous max.
pH	6.0 inst. min.- 9.0 inst. max.

The monitoring frequency for discharges into surface waters not listed as a public water supply (PWS) is once per month. The monitoring frequency for discharges into surface waters listed as a PWS is twice per month for the first year of permit coverage. If the permittee is in complete compliance with all effluent limitations, they may request that the monitoring frequency be reduced to once per month.

3.0 Other Permit Conditions

The general permit prohibits discharge of floating solids or visible foam in other than trace amounts.

A condition is proposed in order to clarify the requirement for reporting of effluent monitoring results. Discharge monitoring is required each month in which a discharge occurs. For months when no discharge occurs, the permittee must submit a DMR certifying that there was no discharge. This system will allow DEQ to verify that either the effluent met the permit limits or that there was no discharge during the month.

Permittees that discharge treated wastewater are required to develop an Operations and Maintenance manual for the permitted treatment works. This requirement is imposed to assure proper operation and maintenance of facilities discharging under the general permit.

In order to assure that the proposed cleanup is conducted according to the methods in the approved Registration Statement, the permittee must construct treatment works prior to discharging and the permittee must notify the Department within 5 days of commencement of operation.

The general permit contains a condition designed to prevent pollution from materials stored on the site, which are not otherwise controlled by the effluent limitations.

If the proposed discharge is to surface waters via a municipal storm sewer system, the general permit requires the permittee to notify the owner of the storm sewer system. This is required in order to facilitate the municipality's efforts to control dry weather flows from the storm sewer.

A request for termination of coverage under the permit is required to provide documentation for the permittee and the Department that the activities covered under the general permit have been concluded and coverage is no longer needed.

The general permit anticipates that the covered treatment works will not be treating sewage from other users or indirect dischargers. Therefore, the permit contains no conditions applicable to such users. This permit also does not cover treated sewage discharges from the permittee or other users.

4.0 Discharges to Public Water Supplies (PWS)

This permit may be used to authorize discharges to a PWS. The Virginia Department of Health, Office of Water Supply Programs generally requires a minimum of 5 miles separation between a discharge and a PWS intake (12 VAC 5-590-200). This general permit will use the same separation distance. Discharges into a surface water designated as a PWS will not be allowed under this permit if the discharge location is less than 5 miles upstream of the PWS intake.

5.0 Revisions to Expiring VPDES General Permit for Petroleum Contaminated Sites and Hydrostatic Tests

The proposed regulation allows discharges to waters designated as a PWS as long as the discharge location is at least five miles upstream of the PWS intake.

The proposed regulation has been expanded in scope over the present and previous versions of this regulation and may be used to permit discharges of water contaminated by chlorinated hydrocarbon solvents.

Effluent limits for dissolved lead, xylenes, and naphthalene have been revised. Effluent limits for ethylene dibromide, 1,2 dichloroethane, and ethanol have been added to this general permit. The basis for each of these changes is discussed below.

6.0 Basis for Effluent Limitations

6.1 Discharges of Gasoline Contaminated Water

This general permit contains both technology-based and water quality-based effluent limits. Where both types of limits were available, the more stringent of the two was chosen. The U.S. EPA has developed a model NPDES permit for discharges from gasoline contaminated underground storage tank sites. The model permit provides technology-based effluent limitations for surface water discharges. The technology basis for those limitations is free product removal followed by air stripping. The limits are set for benzene and the sum of benzene, toluene, ethylbenzene, and xylenes (BTEX). These parameters are used as indicators of the compounds most likely to be found in gasoline. Benzene is considered a good indicator of the removal of volatile organic gasoline constituents via air stripping because of its relatively high water solubility and low volatility compared to other gasoline components.

The EPA model permit states that air strippers have the potential to operate at 99.5% efficiency and it uses this as the basis for limitations on benzene and BTEX. However, it also states that one cannot assume optimal operational conditions at all times and that permit limitations must be achievable with existing technology at reasonable cost. The model permit then establishes optional limitations based on 95% removal efficiency. The 95 percent efficiency rating accounts for operational difficulties which may be encountered during periods of low temperature and/or high humidity when air strippers may not be expected to perform at the 99.5% peak efficiency level. The EPA Treatability Database (RREL Version 5.0) contains information on treatment of the BTEX compounds at various concentrations by air stripping and granular activated carbon. The average removal efficiencies in contaminated groundwater are as follows: benzene 97%, toluene 97.4%, ethylbenzene 87% and xylene 88%. The 95% removal efficiency also provides the possibility for considerable cost savings for the tank owners/operators involved in cleaning up underground storage tank (UST) sites, many of whom are small businesses without the resources to install state-of-the-art equipment. The number of sites cleaned up under the Virginia Petroleum Storage Tank Fund would also increase if the cost per site were less.

The technology-based benzene limit of 50 µg/l in the EPA model permit is derived by assuming a concentration of 1 mg/l benzene in the influent to the treatment system and 95% removal. Thus, the technology-based limitations of 50 µg/l in this general permit are based on the 95% removal efficiency assumption allowed in the EPA model permit.

The water quality-based effluent limitations in this general permit are established pursuant to the VPDES Permit Regulation, 9 VAC 25-31-220 D, and the policy stated in the Virginia Water Quality Standards, 9 VAC 25-260-140 B. The limits are set at what are believed to be safe concentrations for the protection of beneficial uses including the growth and propagation of aquatic organisms inhabiting surface waters which receive the discharge. They assume zero dilution of the effluent by the receiving waters so that they can be applied without regard to effluent or receiving water flows. They are based on information provided in EPA criteria documents for priority pollutants, EPA toxicity databases and conservative application factors.

The aggregate parameter BTEX is used in the EPA model NPDES permit previously discussed to limit 4 parameters. It sets an effluent limitation for BTEX at 750 µg/l based on an assumed influent BTEX concentration of 15 mg/l and the 95% air stripper removal efficiency. The model permit document states that the composition of gasoline is highly variable and any one of the four BTEX components may be the primary constituent. The discussion of water quality-based limits which follows identifies cases where the 750 µg/l technology-based limitation on BTEX would not protect aquatic life from adverse effects.

In some circumstances, if a specific BTEX component were to dominate the mixture the resulting effluent could be toxic at, or below 750 µg/l. For instance, Thomas and Delfino (1991) found that toluene comprises about 50% of the total BTEX in gasoline when analyzed by EPA Methods 610 and 602. If the BTEX limit were set at 750 µg/l then this could allow up to 375 µg/l of toluene in an effluent. The discussion on water quality-based limits which follows sets a limit of 175 µg/l for toluene in discharges to freshwater. The same researchers found that xylenes made up about 30% of the total BTEX in gasoline. When applied to the 750 µg/l BTEX limit in the EPA model permit this results in a possible xylene discharge level of 225 µg/l. Based on available information, total xylenes should not exceed 33 µg/l in freshwater. Without limits on individual parameters, ethylbenzene in discharges to saltwater could still be chronically toxic at the 100 µg/l BTEX technology-based limit given in the model permit using 99.5% removal efficiency.

Based on this discussion, the general permit does not contain a technology-based BTEX limit. Instead, it establishes water quality-based limits on the individual components (benzene, toluene, ethylbenzene and total xylenes), which result in lower total BTEX levels in the discharge. When the proposed limits for individual components are summed, the BTEX value for the freshwater discharges is 627 µg/l and for discharges to saltwater the value is 628.3 µg/l.

6.1.1 Benzene

Freshwater

The EPA criteria document for benzene (EPA 440/5-80-018, EPA 1980a) states that benzene may be acutely toxic to freshwater organisms at concentrations as low as 5,300 µg/l. This is an LC50 value for rainbow trout. The document also states that acute toxicity would occur at lower concentrations among more sensitive species. No data were available concerning the chronic toxicity of benzene to sensitive freshwater organisms. The derivation of a "safe level" for benzene was based on the 5,300 µg/l LC50. This value was divided by 10 in order to approximate a level which would not be expected to cause acute toxicity. (The use of an application factor of 10 was recommended by the National Academy of Sciences in the EPA's publication "Water Quality Criteria, 1972" (EPA/R3/73-033). This use of application factors when setting water quality criteria is still considered valid in situations where data are not sufficient to develop criteria according to more recent guidance.) The resulting "non-lethal" concentration of 530 µg/l was divided by an assumed acute to chronic ratio of 10 to arrive at the water quality-based permit limitation of 53 µg/l. (When actual data are not available, EPA, in the Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001) recommends using an acute to chronic ratio of 10). The EPA model permit's technology-based 50 µg/l value for benzene is more protective, therefore, it was chosen over the 53 µg/l water quality-based concentration.

The Virginia Water Quality Standard Regulation (9 VAC 25-260) contains a human health standard of 710 µg/l for benzene in surface waters that are not a PWS. This concentration is well above the aquatic toxicity concentration of 53 µg/l and the technology-based concentration of 50 µg/l. The lowest of these concentrations is the technology-based limit of 50 µg/l and it is recommended that the effluent limit for benzene in freshwaters that are not a PWS be set at 50 µg/l.

Saltwater

The limited data for benzene and saltwater organisms in the EPA criteria document indicates that stress and survival effects occur at concentrations as low as 700 µg/l when fish are exposed for long periods. Based on the application of a 0.10 safety factor to this chronic effect concentration, the water quality-based limit for discharges to saltwater would be 70 µg/l. Once again, the 50 µg/l technology-based limitation is recommended because it is attainable and more protective.

The Virginia Water Quality Standard Regulation (9 VAC 25-260) contains a human health standard of 710 µg/l for benzene in surface waters that are not a PWS. This concentration is well above the saltwater organism, chronic toxicity concentration of 70 µg/l and the technology-based concentration of 50 µg/l. The lowest of these concentrations is the technology-based limit of 50 µg/l and it is recommended that the

effluent limit for benzene in saltwater be set at 50 µg/l.

Public Water Supplies

The Virginia Water Quality Standard Regulation (9 VAC 25-260) contains a human health standard of 12 µg/l for benzene in public water supplies. This concentration is well below the aquatic toxicity concentration of 53 µg/l and the technology-based concentration of 50 µg/l. The human health standard of 12 µg/l is recommended as the effluent limit for benzene in public water supplies.

6.1.2 Ethylbenzene

Freshwater

The EPA criteria document for ethylbenzene (EPA 440/5-80-048, 1980b) gives an acute effects concentration of 32,000 µg/l. This is an LC50 for bluegill sunfish. Acute toxicity may occur at lower concentrations if more sensitive species were tested. No definitive data are available on the chronic toxicity of ethylbenzene to freshwater organisms. In order to derive an acceptable level of ethylbenzene for the protection of freshwater organisms the acute value of 32,000 µg/l was divided by 100, using the same assumptions employed above for benzene. The resulting value of 320 µg/l is a calculated chronic toxicity concentration for ethylbenzene.

The human health water quality standard for ethylbenzene in surface waters that are not a PWS is 29,000 µg/l. The chronic toxicity concentration of 320 µg/l is well below the human health standard and is the recommended effluent limit.

Saltwater

According to the criteria document, ethylbenzene is acutely toxic to certain saltwater organisms at concentrations as low as 430 µg/l and may be acutely toxic at lower concentrations if more sensitive organisms are tested. Dividing this number by the 100 application factor yields the proposed effluent limit of 4.3 µg/l for discharges to saltwater receiving waters.

Public Water Supplies

The Virginia human-health water quality standard for ethylbenzene in public water supplies is 3,100 µg/l. The freshwater effluent limit based on aquatic toxicity is more stringent than human-health based standard for public water supplies and should be protective of human health concerns.

6.1.3 Toluene

The EPA criteria document for toluene (EPA 440/5-80-075, 1980c) states that acute toxicity to freshwater organisms occurs at 17,500 µg/l and would occur at lower concentrations if more sensitive organisms were tested. No data are available on the chronic toxicity of toluene to freshwater species. Based on the available data for acute toxicity and dividing by the application factor of 100, the proposed effluent limit for toluene discharged to freshwater is 175 µg/l.

The available data indicate that toluene is chronically toxic to certain saltwater organisms at concentrations as low as 5,000 µg/l. Chronic toxicity levels are expected to occur at lower concentrations if more sensitive organisms are tested. Dividing this chronic effects level by 10 resulted in the proposed saltwater discharge effluent limit of 500 µg/l.

The Virginia human health standards for toluene in drinking and non-drinking water streams are 6,800 µg/l and 200,000 µg/l, respectively. The proposed effluent limits based on aquatic toxicity are more stringent than human health based standards and should be protective of human health. For discharges into public water supplies, it is recommended that the freshwater aquatic toxicity value of 175 µg/l be used as the effluent limit.

6.1.4 Xylenes

Xylene is not a 307(a) priority pollutant, therefore no criteria document exists for this compound. There are

three isomers of xylene (ortho, meta and para) and the general permit limits are established so that the sum of all xylenes is considered in evaluating compliance. The proposed effluent limits are based on a search of the EPA's ECOTOX data base. According to ECOTOX, the lowest freshwater LC50 for xylenes is 3,300 µg/l reported for rainbow trout (Mayer and Ellersieck, 1986). Based on the rationale presented earlier for other compounds, this acutely toxic concentration was divided by 10 to account for species that were not tested but which may be more sensitive than rainbow trout. Then, in order to find a concentration that is expected to be safe over chronic exposures, an additional safety factor of 10 was applied to arrive at the proposed effluent limitation of 33 µg/l total xylenes.

The LC50 of 7,400 µg/l for grass shrimp (Neff et al., 1979) is the lowest saltwater value in the ECOTOX database. This LC50 concentration was divided by 100 to derive the saltwater effluent limit of 74 µg/l total xylenes.

There is no Virginia human health water quality standard for xylenes. The Maximum Contaminant Level and Maximum Contaminant Level Goal for xylenes in the EPA Safe Drinking Water Regulation, 40 CFR Part 141, are both set at 10 mg/l (10,000 µg/l). The proposed permit limits based upon aquatic toxicity are more stringent than drinking water standards for xylenes and are expected to be protective of human health.

6.1.5 Lead

The EPA permit model for discharges of petroleum contaminated water does not contain a recommended effluent limit for lead. It is recognized that tetraethyl and tetramethyl lead may be present in gasoline at leaking storage tank sites. These organic lead compounds, if present, are expected to be removed via air stripping along with other volatile organics.

The proposed effluent limits for lead are based upon the Virginia Water Quality Standards for the protection of fresh and saltwater organisms to chronic exposure to lead. The effluent limit for lead in wastewater discharged into streams listed as public water supplies also must meet the water quality standard for lead in public water supplies. While the water quality standards require analysis for dissolved metals, this permit requires that samples be analyzed for Total Recoverable Lead as required by the Virginia Pollutant Discharge Elimination System (VPDES) Permit regulation 9 VAC 25-31-230C. The chronic standard for lead in saltwater when the general permit regulation was initially adopted was 8.5 µg/l. Less stringent water quality criteria were adopted by the Board on September 25, 1997. The lead standard for saltwater used in the existing general permit, however, cannot be revised due to anti-backsliding requirements and the effluent limit for lead discharged into saltwater must remain at 8.5 µg/l.

Virginia's freshwater lead standard for the chronic exposure of organisms to this constituent is based upon the hardness of the water in the waste stream. The lead standard for chronic toxicity to freshwater aquatic organisms is now calculated by equation (1) (Virginia Water Quality Standard Regulation, adopted September 25, 1997). The freshwater lead standard in the present general permit is more stringent than the lead standard in the 1997 Water Quality Standard Regulation and is calculated from equation (2). Equation (2) was taken from the freshwater lead standard for chronic toxicity listed in Virginia's 1992 Water Quality Standard Regulation (VR 680-21-00).

$$(1) e^{(1.273(\ln \text{ hardness})) - 3.259}$$

$$(2) e^{(1.273(\ln \text{ hardness})) - 4.705}$$

The proposed reissuance shall use equation (1) to calculate the aquatic toxicity-based lead effluent limit. The minimum hardness to be used in the calculation of the lead effluent limit is 25 mg/l. The change proposed with this reissuance conforms to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, 9 VAC 25-31-220.L, and 40 CFR § 122.44. The limits proposed for lead are water quality based effluent limits. The revisions to the limits are allowed since the revisions comply with the water quality standards 402(o)(3) and they are consistent with antidegradation 303(d)(4)(B).

The Human Health water quality standard for lead in public water supplies is 15 µg/l. When wastewater is discharged to a public water supply, the effluent limit will be the lower of 15 µg/l or the calculated

aquatic toxicity based limit.

6.1.6 Ethylene Dibromide (EDB)

Ethylene dibromide (a.k.a. 1,2 dibromoethane, CAS Number: 106-93-4) is a compound added to leaded gasolines to remove lead from the combustion chamber and prevent lead oxide and lead sulfide deposits from forming within an internal combustion engine. Lead scavengers such as ethylene dibromide (EDB) are persistent in groundwater and, in combination with the BTEX constituents can be good indicators of a leaded gasoline release.

EPA has no criteria documents for EDB nor are there existing water quality standards for this constituent. According to the ECOTOX database, the lowest freshwater LC50 concentration for this constituent is 15,000 µg/l for largemouth bass (Davis and Hardcastle, 1959). Dividing this LC50 value by 100 leads to a concentration of 150 µg/l. In saltwater, the lowest LC50 is 4800 µg/l for the sheepshead minnow (Landau and Tucker, 1984). Dividing this LC50 value by 100 leads to a saltwater aquatic toxicity value of 48 µg/l.

The procedure used by Virginia for calculating water quality standards for human health involves using risk factors, average adult body weight, intake of water and fish (public water supplies) and fish only, and a bioconcentration factor for the constituent. Ethylene dibromide is considered a human carcinogen and equation (3) listed below is used by Virginia to derive human-health based water quality criteria for waters that are not public water supplies. Based upon an excess lifetime cancer risk of one in one hundred thousand and an oral carcinogenic potency slope factor of 2 mg/kg/day (EPA IRIS database, 2007c), a human health concentration of 5.3 µg/l was derived for EDB in surface waters that are not public water supplies. This human health concentration is much more stringent than the fresh or saltwater toxicity values and it is the recommended effluent limit for EDB in waters that are not listed as a PWS.

The federal drinking water standard for EDB is .05 µg/l. Equation (4) shown below is used by Virginia to develop human health based water quality criteria for surface waters listed as public water supplies. Based upon an excess lifetime cancer risk of one in one hundred thousand and an oral carcinogenic potency slope factor of 2 mg/kg/day (EPA IRIS database, 2007c), a human health concentration of .169 µg/l was derived for EDB in surface waters that are public water supplies. This human health concentration is the recommended effluent limit for EDB in surface waters listed as a PWS.

Equation to derive human health criteria for surface waters that are not a PWS:

$$(3) \text{ WQS} = \frac{\text{risk} * \text{adult body weight}}{\text{CSFo} * \text{FI} * \text{BCF}}$$

Equation to derive human health criteria for public water supplies:

$$(4) \text{ WQS} = \frac{\text{risk} * \text{adult body weight}}{\text{CSFo} * [\text{water intake} + (\text{FI} * \text{BCF})]}$$

Where: Risk = excess lifetime cancer risk. The Water Quality Standards are based on an excess lifetime cancer risk of one in one hundred thousand risk level or 10^{-5}

Adult body weight = 70 kg

CSFo = carcinogenic slope factor, oral exposure route (mg/kg/day)

Water intake = typical daily water intake for an adult, 2 l/day

FI = fish intake. The Water Quality Standards are based on a fish intake of .0065 kg/day

BCF = bioaccumulation factor (l/kg)

Derivation of Human Health concentration for EDB in surface waters that are not a PWS:

$$\text{WQS} = \frac{1 \times 10^{-5} * 70 \text{ kg}}{\text{CSFo} * [\text{water intake} + (\text{FI} * \text{BCF})]}$$

$$2 \text{ mg/kg/day} * .0065 \text{ kg/day} * 10.2 \text{ l/kg}$$

$$\text{WQS} = 5.3 \times 10^{-3} \text{ mg/l or } 5.3 \text{ } \mu\text{g/l}$$

According to EXTOTOXNET DATABASE (1996), the bioaccumulation factor for EDB is 10.2 l/kg. The carcinogenic slope factor, oral exposure route for EDB is 2 mg/kg/day (EPA IRIS database, 2007c).

Derivation of Human Health concentration for EDB in surface waters that are a PWS:

$$\text{WQS} = \frac{1 \times 10^{-5} * 70 \text{ kg}}{2 \text{ mg/kg/day} * [2 \text{ l/day} + (.0065 \text{ kg/day} * 10.2 \text{ l/kg])}}$$

$$\text{WQS} = 1.69 \times 10^{-4} \text{ mg/l or } .169 \text{ } \mu\text{g/l}$$

6.1.7 1,2-Dichloroethane (1,2 DCA)

Another compound commonly added to leaded gasoline as a lead scavenger is 1,2-Dichloroethane (1,2 DCA, CAS Number: 107-06-20). The EPA criteria document for chlorinated ethanes (EPA 440/5-80-029, 1980d) states that acute toxicity to freshwater organisms exposed to 1,2 DCA occurs at 118,000 $\mu\text{g/l}$ and would occur at lower concentrations if more sensitive organisms were tested. No data are available on the chronic toxicity of 1,2 DCA to freshwater species. Based on the available data for acute toxicity and dividing by the application factor of 100, an aquatic toxicity limit for 1,2 DCA in freshwater is 1,180 $\mu\text{g/l}$.

The available data indicate that 1,2 DCA is acutely toxic to certain saltwater organisms at concentrations as low as 113,000 $\mu\text{g/l}$. Based on the available data for acute toxicity and dividing by the application factor of 100, the aquatic toxicity limit for 1,2 DCA in saltwater is 1,130 $\mu\text{g/l}$.

The Virginia human health standards for 1,2 DCA in surface waters that are public water supplies and surface waters that are not public water supplies are 3.8 $\mu\text{g/l}$ and 990 $\mu\text{g/l}$, respectively. The human health criteria are more stringent than the aquatic toxicity criteria. It is recommended that a limit of 990 $\mu\text{g/l}$ be used for discharges to surface waters that are not public water supplies. For discharges into public water supplies, it is recommended that the Virginia public water quality criteria of 3.8 $\mu\text{g/l}$ be used.

6.1.8 Methyl Tertiary Butyl Ether

Methyl-tertiary-butyl ether (MTBE) is a common additive in "reformulated" automotive gasolines. This oxygenate is supposed to reduce winter-time carbon monoxide levels in U.S. cities. It also is believed to be effective in reducing ozone and other toxics in the air year-round. If MTBE is used, it can be present in gasoline at up to 15% of the volume of the fuel. MTBE is an extremely hydrophilic compound. Unlike most petroleum products, it readily dissolves in water. The presence of MTBE in gasoline can increase the solubility of the fuel mixture in groundwater. MTBE may be removed from contaminated groundwater by air stripping treatment technologies. However, due to its hydrophilic nature, a higher air/water ratio is required to remove this constituent via air stripping than is required for BTEX removal. According to the EPA Treatability Database (RREL Version 5.0), MTBE removal efficiency via air stripping ranges from approximately 63 percent to 79 percent. If the MTBE concentration in the system influent is 10 mg/l and removal efficiency of 75 percent is achieved, air stripping should be capable of reducing the MTBE concentration to 2.5 mg/l.

Neither EPA nor the DEQ has established water quality criteria for MTBE for protection of aquatic life or human health. Literature searches indicated several studies that evaluated the effects of MTBE on aquatic organisms. According to BenKinney et al. (1994), MTBE was acutely toxic (LC50) to green algae (*Selenastrum capricornutum*) at a concentration of 184,000 $\mu\text{g/l}$. Geiger and associates (1988) found that MTBE was acutely toxic to the fathead minnow (*Pimephales promelas*) at a concentration of 672 mg/l (672,000 $\mu\text{g/l}$). Application of the customary safety factor of 100 to the LC50 concentration for green algae results in a concentration of 1,840 $\mu\text{g/l}$. This concentration is recommended as the discharge limit for MTBE into freshwater.

The literature search revealed several studies performed on the toxicity of MTBE to marine organisms. BenKinney et al. (1994) found that MTBE was acutely toxic to the inland silverside (*Menidia beryllina*) at a concentration of 574 mg/l. According to Boeri and associates (1994), MTBE was acutely toxic to mysid shrimp (*Mysidopsis bahia*) at 44 mg/l (44,000 µg/l). Application of the customary safety factor of 100 to the LC50 for the mysid shrimp results in a concentration of 440 µg/l. A concentration of 440 µg/l is recommended as the effluent limit for MTBE discharged into saltwater.

According to Fujiwara et al. (1984) and the European Fuel Oxygenates Association, bioaccumulation factors for MTBE in fish tissue are 1.5 l/kg and 1.6 l/kg, respectively. Moreover, Fujiwara found that discontinued exposure of the fish to MTBE caused fish to quickly excrete the MTBE remaining in their tissues.

Derivation of Human Health concentration for MTBE in surface waters that are not a PWS:

$$\text{WQS} = \frac{1 \times 10^{-5} * 70 \text{ kg}}{4 \times 10^{-3} \text{ mg/kg/day} * .0065 \text{ kg/day} * 1.6 \text{ l/kg}}$$

$$\text{WQS} = 16.827 \text{ mg/l or } 16,827 \text{ µg/l}$$

NOTE: The Carcinogenic Slope Factor, oral exposure route of 4×10^{-3} mg/kg/day is a value from the EPA Region III October 2006 Risk Based Concentration Table (EPA Region III, 2006).

The Virginia Department of Health, Office of Water Programs has established a trigger level of 15 µg/l for MTBE in public drinking water. The U.S. EPA has established a drinking water health advisory for MTBE of 20 – 40 µg/l based upon taste and odor effects. These levels are lower than the lowest concentration that caused observable effects in animals. For waters designated as a PWS, an effluent limit of 15 µg/l for MTBE is recommended.

6.1.9 Ethanol

Ethanol has been used in U.S. automotive gasolines for over thirty years. During the oil embargo of 1973, ethanol was used as a gasoline extender to counteract rising fuel prices and increase the nation's gasoline supply (Texas State Energy Conservation Office, 2007a). As lead was phased out of gasoline, ethanol and MTBE were used as octane enhancers in lieu of tetraethyl lead. Later, MTBE and ethanol were the primary products used to meet the standards for the Wintertime Oxygenated Fuels Program (1992) and Phase 1 and Phase 2 of the Reformulated Gasoline Program (RFG, 1995 and 2000). Ethanol was used primarily in gasoline sold in the Midwest and MTBE was used in gasoline sold in most of the rest of the U.S.

The federal Energy Policy Act of 2005 removed the oxygenate mandate for RFG and established a national renewable fuel standard (RFS; Meyers, 2006). Consequently, suppliers requested major pipelines to remove MTBE from RFG. In February 2006, Colonial Pipeline, which serves Virginia, announced that it would discontinue shipping RFG with MTBE (O'Connor, 2006). In the Spring of 2006, many RFG marketers in Virginia began being supplied with gasoline containing up to 10% ethanol (E10) in order to replace the MTBE.

The fate and transport of ethanol in groundwater is controlled primarily by biodegradation (Ulrich, 1999). Based on the chemical behavior of ethanol, it is expected that ethanol in subsurface releases of oxygenated gasolines will rapidly partition into groundwater and will become the dominant dissolved contaminant immediately downgradient of the release. It is believed that mechanisms for attenuating subsurface contaminants, such as sorption, volatilization, and abiotic degradation, will not substantially contribute to the decreased mobility or loss of ethanol in subsurface aquifers.

According to EPA (2000), ethanol is not expected to persist in the groundwater because it biodegrades readily nor does ethanol appear to pose as great a danger to groundwater supplies as does MTBE. Ethanol is considerably less volatile than MTBE in surface waters because it has a lower Henry's law constant (Layton and Daniels, 1999). Though ethanol's volatilization-loss rate from water is much less

than that of MTBE, ethanol will not persist in water because it undergoes fairly rapid biodegradation. Thus, ethanol is a short-lived compound in surface waters and subsurface aquifers.

Under the Clean Water Act, the EPA promulgated effluent limitations and standards controlling discharges from the production of organic chemicals, plastics, and synthetic fibers (EPA, 2005 and 2007a), and from pharmaceutical facilities with operations in fermentation; extraction; chemical synthesis; mixing, compounding, and formulating; and research (EPA, 1999 and 2007b). For certain pharmaceutical facilities directly discharging ethanol, the maximum daily discharge limit for ethanol is 10.0 mg/L, and the average monthly discharge must not exceed 4.1 mg/L.

Jack Hwang of EPA Region 3 performed initial research on discharge limits and extra parameters for monitoring blended fuel releases in response to inquiries from the State of Maryland and the Commonwealth of Virginia (Hwang, 2007). Based on discussions with an EPA regional toxicologist and with Dr. John Wilson, one of EPA's microbiologists, Mr. Hwang indicates that:

“There is no concern for human health risk - the limit would be very high, nor is there concern for toxicity to aquatic organisms. If there is a need for setting an ethanol limit, the most likely reason would be due to the consideration of "oxygen depletion" in surface water. However, the limit could be site specific depending on the characteristics of the receiving water body and the allowable dilution ratio.”

Ethanol is a short-lived compound in the environment due to the ubiquity of microorganisms capable of metabolizing ethanol and to the rapid rates of ethanol biodegradation (Ulrich, 1999). Since ethanol is rapidly metabolized, it is unlikely that ethanol will travel a substantial distance once released into the subsurface or that it will persist in the subsurface or surface waters. It should be noted, however, for E85 (ethanol comprises 85% of the gasoline) releases or neat ethanol releases into surface waters, microorganisms involved with breaking down the ethanol could scavenge the available oxygen thereby creating anaerobic conditions and causing a fish kill (Kuhn, 2007). The same would likely hold true for large E10 releases into surface waters.

Neither the DEQ nor EPA has promulgated acute and chronic water quality criteria for ethanol in surface waters. Acute and chronic water quality benchmarks for ethanol were developed using toxicity information available for aquatic invertebrates (*Daphnia* species), rainbow trout, and the fathead minnow from EPA's ECOTOX database (Iott, 2001). Based on the available data and using Tier II procedures outlined in the for EPA's Final Water Quality Guidance for the Great Lakes System, an acute water quality benchmark for ethanol in surface water is 564 mg/L, and a chronic water quality benchmark for ethanol is 63 mg/L. The values indicate that an ethanol concentration of 564 mg/L in the water column is likely to cause acute toxicity to freshwater aquatic life and that an ethanol concentration of 64 mg/L in the water column is likely to cause chronic toxicity to freshwater life. The chronic and acute water quality benchmarks developed for ethanol (EPA, 2006) are lower than draft water quality criteria developed by the EPA.

The DEQ has limited experience in dealing with ethanol in discharges to surface water. The DEQ Valley Regional Office has reissued a permit to Merck & Co. to discharge treated production and sanitary wastewater generated at a pharmaceutical manufacturing facility, non-contact cooling water, and storm water generated in the area around the facility (Aschenbach, 2007). Revisions were made to the previous effluent limits, in part, so that new effluent monitoring and limitations matched the requirements of the Federal Effluent Guidelines for the Pharmaceutical Manufacturing Category. Although Virginia does not have a Water Quality Standard for ethanol, Outfall 101 of the Merck & Co. permit follows the EPA Guideline of 10 mg/L for a daily maximum limit (DML) and 4.1 mg/L for a monthly average limit (MAL) in terms of ethanol concentration, or 45 kg/d for a DML and 19 kg/d for an MAL in terms of ethanol loading. At the time of this writing, the Discharge Monitoring Report (DMR) analytical results for ethanol monitoring required to be performed once every six months are not yet due. The surface water that receives the discharge from the facility is designated as a Tier 1 water body which means that

the existing uses of the water body and water quality to protect such uses must be maintained in accordance with the State Water Control Board's antidegradation policy.

Ethanol does not bioaccumulate or bioconcentrate in the tissue of living organisms due to ethanol's chemical properties and to the ability of most organisms to metabolize ethanol (Iott, 2001). Human health risks from exposure to ethanol appear to be minimal, especially when compared with the risks posed by other gasoline constituents. Likewise, aquatic toxicity levels for ethanol are quite high. Ethanol also appears to degrade rapidly in both surface and subsurface environments. Based upon these factors, the DEQ does not believe that effluent limits for ethanol are needed for discharge of waters associated with petroleum products containing up to 10% ethanol.

Ethanol concentrations in discharges of petroleum products containing greater than 10% ethanol may pose risks to aquatic organisms. For discharge of petroleum products containing greater than 10% ethanol into surface water bodies not designated as a PWS, a maximum discharge limit of 4.1 mg/L is proposed. This same limit also is proposed for saltwater receiving bodies.

6.1.10 pH

The pH limits in this general permit are based on the Virginia Water Quality Standards and range from a low of six (6.0) standard units to nine (9.0) standard units.

6.2 Basis for Effluent Limitations - Discharges of Petroleum Products other than Gasoline

The EPA model permit for UST remediation sites only addresses gasoline contaminated sites. This general permit is also designed to be used at sites which are contaminated by petroleum products other than gasoline (non-gasoline motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils). In addition to containing small amounts of the volatile organic compounds such as benzene, these products contain more of the polynuclear aromatic hydrocarbons (PAHs) than are found in gasoline. PAHs are less soluble in water than the volatile compounds and they are less amenable to air stripping. It is possible that a treatment system that is capable of removing the volatile compounds like benzene to acceptable levels may not effectively remove the PAHs. Based upon the types and relative proportions of the constituents present in the non-gasoline petroleum products, benzene and the BTEX constituents are not good indicator parameters to use in evaluating the quality of effluents from sites contaminated with this category of petroleum.

6.2.1 Naphthalene

The effluent limitation for naphthalene proposed in this general permit is a water quality-based limit. It is to be applied at sites where contamination is from petroleum products other than gasoline. Naphthalene is a component of gasoline and non-gasoline petroleum products, but its relative concentration is higher in products such as diesel and kerosene than in gasoline (Thomas & Delfino, 1991). It is less soluble in water than benzene (solubility 30 mg/l vs. 1780 mg/l) and is less amenable to air stripping (Henry's Law Constant 4.83×10^{-4} vs. 5.55×10^{-3} @ 25°C). These characteristics make the treatability of naphthalene more similar to that of the heavier PAH components than the BTEX compounds.

PAHs in general are relatively insoluble in water. For instance, the solubilities of the typical petroleum PAHs anthracene, phenanthrene and fluorene are 1.29 mg/l, 0.8 mg/l and 1.9 mg/l, respectively. These compounds are more likely to be found in free product or adsorbed onto soils at a petroleum contaminated site rather than dissolved in groundwater. As a moderately soluble compound, naphthalene is more likely to dissolve in groundwater and migrate from the source of contamination. Therefore, it occupies an intermediate position between the volatile BTEX compounds and the less soluble PAHs. By selecting naphthalene as the indicator parameter for this category of contaminated sites, the general permit relies on the assumption that if naphthalene has been removed to acceptable levels, then the heavier PAHs associated with the contamination should have either remained in the soils at the source or been reduced to an acceptable level with the treatment for naphthalene.

The limited data available in the EPA Treatability Database indicate that treatment with granular activated

carbon (GAC) filtration is more effective in removing naphthalene and other PAHs than is air stripping. Although this general permit does not mandate a treatment technology, the low solubility of PAHs makes them amenable to treatment by GAC filtration of the contaminated groundwater.

The EPA criteria document for naphthalene (EPA 440/5-80-059) lists a chronic effect concentration of 620 µg/l for fathead minnows, but it states that effects would occur at lower concentrations if more sensitive freshwater organisms were tested. According to the ECOTOX DATABASE, naphthalene at a concentration of 1,000 µg/l was lethal to 50% of the water fleas (*Daphnia pulex*) tested (Truco et al., 1983). DeGaere and associates (1982) tested the effects of naphthalene on Rainbow Trout and reported an LC50 concentration of 1600 µg/l. Based upon these more recent studies, it is recommended that the effluent limit for naphthalene in freshwater be set at 10 µg/l.

The lowest observed LC50 value in the EPA criteria document for naphthalene (EPA, 1980e) reportedly was 2,350 µg/l, in a test with grass shrimp. Korn and associates (1979) tested the effects of naphthalene on humpy shrimp (*Pandalus goniurus*) and found that a naphthalene concentration of 1020 µg/l was lethal to 50% of the shrimp tested. Pink salmon (*Oncorhynchus gorbuscha*) were exposed to naphthalene and Rice and Thomas (1989) found that a concentration of 890 µg/l was lethal to 50% of the fish tested. Dividing this LC50 by 100 results LC50 by 100 in the proposed saltwater effluent limit of 8.9 µg/l.

There is no Virginia human health water quality standard for naphthalene. Equation (5) below is used by DEQ staff to derive human health based water quality standards for discharges of non-carcinogens to public water supplies. The human health derived value is much greater than the aquatic toxicity value of 10 µg/l. It is recommended that freshwater aquatic toxicity value of 10 µg/l be used for the naphthalene effluent limit in public water supplies.

$$(5) \text{ WQS} = \frac{\text{RfD} * \text{adult body weight}}{\text{water intake} + (\text{FI} * \text{BCF})}$$

Where: RfD = Reference Dose (mg/kg/day).

Adult body weight = 70 kg

Water intake = typical daily water intake for an adult, 2 l/day

FI = fish intake. The Water Quality Standards are based on a fish intake of .0065 kg/day

BCF = bioaccumulation factor (l/kg)

$$\text{WQS} = \frac{2 \times 10^{-2} \text{ mg/kg/day} * 70 \text{ kg}}{2 \text{ l/day} + (.0065 \text{ kg/day} * 10.5 \text{ l/kg})}$$

$$\text{WQS} = .68 \text{ mg/l} = 680 \text{ µg/l}$$

Note: The reference dose is from the EPA IRIS database (EPA, 2007c) and the bioaccumulation factor is from EPA (2002).

6.2.2 Benzene and MTBE (discharges to a PWS only)

Benzene and MTBE are not found in high concentrations in petroleum products other than gasoline. MTBE is a gasoline additive and not intentionally placed in petroleum products other than gasoline. Benzene has a relatively low boiling point and most of the benzene in crude oil feedstocks will remain with the gasoline fraction hydrocarbons during the petroleum refining process.

After refining, petroleum products are transported via a common transportation network (pipelines, tanker trucks) and there is some unintentional mixing of products that occurs. While middle distillates (kerosene, diesel, #2 fuel oil) contain only very small amounts of benzene and MTBE is not intentionally placed in them, DEQ staff have found that MTBE and benzene are the most commonly found petroleum constituents in drinking water supplies contaminated by middle distillates. Due the presence of these constituents in water contaminated by petroleum products other than gasoline, it is recommended that all discharges of

petroleum-contaminated wastewater to public water supplies contain effluent limits for benzene and MTBE. Limits proposed for these constituents are 12 µg/l for benzene and 15 µg/l for MTBE.

6.2.3 Total Petroleum Hydrocarbons (TPH)

The general permit proposes a technology-based limit of 15 mg/l for the parameter Total Petroleum Hydrocarbons (TPH). This limit is applicable for discharges where the contamination is from petroleum products other than gasoline. It is based on the ability of simple oil/water separator technology to recover free product from water. Wastewater that is discharged without a visible sheen is generally expected to meet this effluent limitation. Monitoring data generated during a previous term of general permit VAG83 indicates that effluents are generally below this level. DEQ has utilized an effluent limitation of 15 mg/l oil & grease for many years in individual permits for potential sources of petroleum hydrocarbons. Recently, the DEQ determined that the oil & grease analytical method is better suited for detection of animal and vegetable fats rather than petroleum. Therefore, the parameter TPH is being used in the general permit rather than oil & grease.

The term "used oils" is used in the general permit to refer to those petroleum products that have served their useful purpose and have been collected for recycling or disposal. Tanks that store used oils are found at industrial sites and at automotive service stations. These tanks have the potential to leak into surrounding soils and contaminate groundwater. The materials in used oil storage tanks can be a mixture of motor oils and other petroleum products, as well as solvents or other organic chemicals. Used oils also may contain dissolved metals derived from the machinery from which the oil was recovered. These mixtures pose potential environmental impacts that may not be adequately addressed by the pollutant parameters established to control discharges from the sites contaminated by products other than gasoline. Therefore, the general permit proposes to require that when the contamination is from used oils, additional monitoring shall be conducted to scan the wastewater for a wide range of organic compounds and metals. This information will be evaluated and a decision on the need for additional limits on discharges of this type will be made prior to the expiration date of the general permit. In no case will the general permit allow a discharge of wastewaters if the contamination is from used oils that are classified as hazardous materials according to the Virginia Hazardous Waste Regulation, 9 VAC 20-60.

6.3 Discharges from Hydrostatic Testing of Tanks and Pipelines

When this permit was reissued in 1998, hydrostatic test waters from petroleum facilities were included so that a VPDES permit could properly govern them. The permit regulation was further expanded in 2003 to include coverage of discharges from hydrostatic testing of natural gas pipelines.

Natural gas, like other petroleum products, is not constant in its composition or the relative proportions of individual constituents within that product. According to Technocarb (2002), methane typically makes up approximately 95 percent of natural gas by volume. Ethane and propane generally make up approximately two and one percent of the gas, respectively. Other constituents that typically make up the remaining two percent of the mixture include butane, carbon dioxide, and nitrogen. There is no aquatic or human toxicity data for these compounds.

Discharges from hydrostatic testing of pipelines are generally one-time occurrences of less than 48 hours. Such frequencies and durations preclude the necessity for application of toxic parameters except for total residual chlorine (TRC). TRC is potentially present in high concentrations when treated potable water is used as the source water for testing. Discussion of the recommended effluent limits for discharges of hydrostatic test water from natural gas pipelines is presented below. In addition to the effluent limits, the following requirements will also apply to hydrostatic discharges from natural gas pipelines:

1. The equipment being tested shall be substantially free of debris, raw material, product, or other residual materials.
2. The discharge flow shall be controlled in such a manner that prevents flooding, erosion, or excessive sediment influx into the receiving water body.

6.3.1 Total Petroleum Hydrocarbons (TPH)

The limit for TPH is based on the ability of simple oil-water separator technology to recover petroleum from water. Wastewater that is discharged without a visible sheen is generally expected to meet this effluent limitation. DEQ has used this limitation for many individual permits for many years and monitoring data has demonstrated that it is readily achievable. Mass limits are not applicable to this type of pollutant and discharge and are not required.

6.3.2 Total Organic Carbon (TOC)

Total organic carbon (TOC) is monitored to assure that the effluent is not contaminated with non-petroleum organic substances. Staff members generally believe that TOC concentrations in this type of discharge are low. However, should sampling data indicate high levels of TOC, the permit may be modified at a later time to include such a limit.

6.3.3 Total Suspended Solids (TSS)

Total suspended solids (TSS) is monitored to assure that the effluent is not contaminated with excessive amounts of solids that might be flushed out of pipes along with the test waters. If significant concentrations of suspended solids are detected, the permit may be modified at a later time to include a limit.

6.3.4 Total Residual Chlorine (TRC)

Total residual chlorine (TRC) is necessary for those hydrostatic tests that use chlorinated potable drinking water as the source water for testing. The limit is based on the chronic aquatic life criterion in Virginia's water quality standards.

6.3.5 pH

The pH limits in this general permit are based on the Virginia Water Quality Standards and range from six (6.0) standard units to nine (9.0) standard units.

6.4 Discharges of Water Contaminated by Chlorinated Hydrocarbon Solvents

Many different chlorinated hydrocarbons are, or have been, used as solvents. Dealing with these materials when they have been released into the environment is further complicated by the fact that they often break down into other chlorinated hydrocarbon compounds; many of which also are solvents. Therefore, although only one type of chlorinated hydrocarbon may have been released at a site, subsequent cleanup efforts may have to deal with multiple chlorinated hydrocarbons. Figures 1 and 2 show the degradation products that are or can be created by the breakdown of 1,1,1 trichloroethane, tetrachloroethane, and carbon tetrachloride.

Effluent limits recommended for chlorinated hydrocarbon solvent constituents were based upon both the toxicity of the material as well as treatment technology. Some of the toxicity-based limits that were considered include promulgated water quality standards, drinking water maximum contaminant levels (MCLS), aquatic toxicity data from the EPA ECOTOX database, and tap water risk-based concentrations from EPA Region III. Staff also considered effluent limits that had been placed in individual VPDES permits.

Staff recommended one set of effluent limits for these chlorinated hydrocarbon solvents and set the limits to protect both aquatic life and human health. The effluent limits were based upon the assumption of a discharge into a PWS and the limits had to meet criteria for public water supplies. Table 1 summarizes the pertinent regulatory values that exist for chlorinated hydrocarbon solvent compounds and the effluent limits that have been proposed for these constituents.

Figure 1. Reductive Dehalogenation of 1,1,1 TCA and Tetrachloroethylene
(from Dragun 1988)

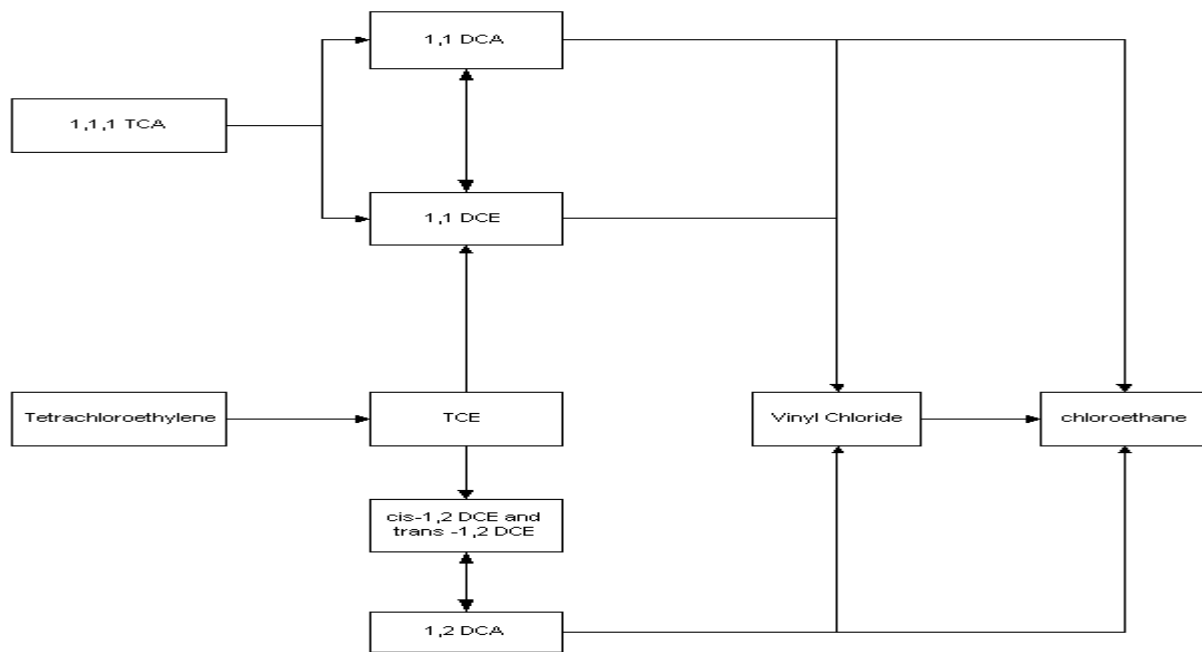
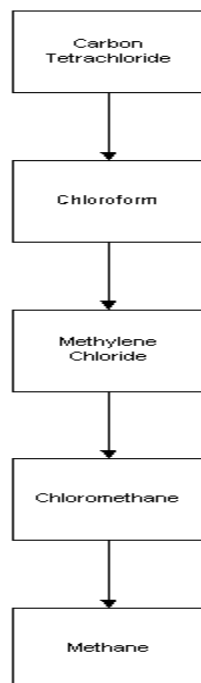


Figure 2. Reductive Dechlorination of Carbon Tetrachloride
(from RTDF Bioremediation Consortium 1988)



Name	CAS Number	Effluent limits from individual permits (µg/l)	Drinking Water MCL (µg/l)	WQS, HH for PWS¹ (µg/l)	WQS, HH for Other Waters² (µg/l)	Toxicity FW³ (µg/l)	Toxicity SW³ (µg/l)	EPA Reg. III Tap Water RBC⁴ (µg/l)	Recommended Effluent Limit (µg/l)
Chloroform	67663	100 (3 permits)		350	29000	290	815		100
1,1 Dichloroethane	75343	4 (one permit), 5 (2 permits)						900	4
1,2 Dichloroethane	107062	5 (3 permits)	5	3.8	990	1160	1130		3.8
1,1 Dichloroethylene ^A	75354	7 (4 permits)	7	310	17000	740	2240		7
cis-1,2 Dichloroethylene	159592	70 (3 permits)	70						70
trans-1,2 Dichloroethylene	156605	100 (4 permits)	100	700	140000	2200			100
Methylene Chloride ^A	75092	5 (2 permits)	5	47	16000	1930	770		5
Tetrachloroethylene ^A	127184	5 (4 permits) and 79 (1 permit)	5	8	89	18	13		5
1,1,1 Trichloroethane	71556	200 (4 permits)	200			112	3120		112
1,1,2 Trichloroethane	79005	5	5	6	420	180	270		5
Trichloroethylene	79016	5 (3 permits)	5	27	810	19	140		5
Vinyl Chloride	75014	2 (3 permits)	2	0.23	61				2
Carbon Tetrachloride	56235	5	5	2.5	44	20	500		2.5
1,2 Dichlorobenzene	95501	600		2700	17000	15.8	19.7		15.8
Chlorobenzene	108907	NL	100	680	21000	3.4	89		3
Trichlorofluoromethane	75694	5						1300	5
Chloroethane ^A	75003	5						3.6	3

¹ The values in this column are human health criteria for public water supplies from the Virginia Water Quality Standards (9 VAC 25-260).

² The values in this column are human health criteria for surface waters that are not public water supplies. These numbers are from the Virginia Water Quality Standards (9 VAC 25-260).

³ Aquatic toxicity values were derived from the EPA ECOTOX database.

⁴ These are tap water risk-based concentrations from the EPA Region III Risk-Based Concentration Table. These values are provided only for constituents for which regulatory concentrations do not exist.

^A Synonyms: dichloromethane = methylene chloride; ethyl chloride = chloroethane; 1,1 dichloroethene = 1,1 dichloroethylene; perchloroethylene = tetrachloroethylene

6.4.1 Chloroform

According to Howard (1990), chloroform is used as an industrial solvent, extractant, and chemical intermediate. Chloroform also may be created by the reductive dehalogenation of carbon tetrachloride that has been released into the environment (RRDF Bioremediation Group, 1988). The human-health Water Quality Standards for chloroform are 350 µg/l for public water supplies and 29,000 µg/l for other surface waters. The DEQ Northern Regional Office has issued three individual permits having an effluent limit for chloroform and Northern Regional Staff used a technology-based limit of 100 µg/l for all three permits. LeBlanc (1980) found that chloroform, at a concentration of 29000 µg/l, killed fifty percent of the water fleas (*Daphnia magna*) tested. Bentley and associates (1979) found that chloroform killed fifty percent of the pink shrimp (*Penaeus douranum*) tested when the chloroform concentration was 81500 µg/l. Applying the safety factor of 100 to these LC50 values resulted in chronic toxicity levels for freshwater and saltwater organisms of 290 and 815 µg/l respectively. The technology-based limit of 100 µg/l that was used for the individual VPDES permits in the Northern Region is the most conservative and protective concentration and is recommended as the effluent limit for chloroform.

6.4.2 1,1 Dichloroethane

1,1 Dichloroethane (1,1 DCA) predominantly is used to make other chemicals (Howard, 1990, and ATSDR, 1999a). This constituent also is used to dissolve substances such as paint and varnish, and as a degreasing agent (ATSDR, 1999a). 1,1 DCA may be created by the breakdown of 1,1,1 trichloroethane that has been released into the environment (Dragun, 1988). There is very limited aquatic toxicity information for 1,1 dichloroethane. There are no promulgated drinking water standards for this constituent nor is there a drinking water MCL. The EPA ECOTOX database contains no information for this constituent. The EPA Region III risk-based concentration for this constituent in tap water is 900 µg/l. The DEQ Northern Regional Office has placed an effluent limit of 4 µg/l for this constituent in one individual VPDES permit and 5 µg/l in two permits. The TAC recommends an effluent limit of 4 µg/l for 1,1 dichloroethane.

6.4.3 1,2 Dichloroethane

According to ATSDR (2001a), 1,2 dichloroethane (1,2 DCA) is used in the production of vinyl chloride which, in turn, is used to make a variety of plastic and vinyl products. 1,2 DCA also is used as a solvent and as a lead scavenger in leaded gasoline. This constituent may be created in the environment by reducing the carbon-carbon double bonds in the cis and trans 1,2 dichloroethylene isomers (Dragun, 1988). The Northern Regional Office has placed an effluent limit of 5 µg/l for 1,2 dichloroethane (1,2 DCA) in 3 individual VPDES permits. The Federal drinking water MCL for 1,2 DCA is 5 µg/l. Virginia's human-health based water quality standards for this constituent are 3.8 µg/l and 990 µg/l for public water supplies and for other surface waters, respectively. According to the ECOTOX database, the lowest saltwater LC50 concentration for 1,2 DCA is 113000 µg/l (EPA, 1978). The lowest freshwater LC50 concentration reported for 1,2 DCA is 116000 µg/l (Walbridge, 1983). Applying the safety factor of 100 to these LC50 values results in concentrations of 1160 µg/l and 1130 µg/l for freshwater and saltwater, respectively. The water quality criteria of 3.8 µg/l for public water supplies is more protective than the drinking water MCL and the aquatic toxicity-based values and is recommended as the effluent limit.

6.4.4 1,1 Dichloroethylene

1,1 Dichloroethylene (1,1 DCE) is used in the manufacture of plastic wrap, adhesives, and synthetic fiber (Howard, 1989). This constituent also is formed during the anaerobic biodegradation of trichloroethylene (TCE) and the hydrolysis of 1,1,1 trichloroethane (1,1,1 TCA, Howard, 1989, and Dragun, 1988). The human health Water Quality Standards for 1,1 DCE are 310 µg/l for public water supplies and 17000 µg/l for other surface waters. The Federal drinking water MCL for 1,1 DCE is 7 µg/l. Dill and associates (1980) found that 1,1 DCE at a concentration of 11600 µg/l killed half of the water fleas (*Daphnia magna*) tested. The lowest reported LC50 concentration for saltwater organisms was 224000 µg/l (EPA 1978). The DEQ Northern Regional Office has an effluent limit of 7 µg/l for 1,1 DCE in four individual VPDES permits. This effluent limit is the same as the Federal MCL and is recommended as the effluent limit for this general

permit.

6.4.5 cis-1,2 Dichloroethylene

The cis-1,2 dichloroethylene (cis 1,2 DCE) isomer is not a priority pollutant. Much of the cis-1,2 DCE that is found in the environment comes from reductive dehalogenation of trichloroethylene (Howard, 1990). The Federal MCL for cis-1,2 DCE is 70 µg/l. The DEQ Northern Regional Office has three individual VPDES permits with effluent limits for this constituent and all of them have an effluent limit of 70 µg/l. The TAC recommends an effluent limit of 70 µg/l for cis-1,2 DCE.

6.4.6 trans 1,2 Dichloroethylene

Trans 1,2 dichloroethylene (trans-1,2 DCE) is a priority pollutant and the preferred isomer of DCE in most industrial applications (HSDB, 1995). This constituent is used as a solvent and extractant and also is used in manufacturing perfumes, lacquers, and thermoplastics (Howard, 1990). Trans-1,2 DCE also can be created by the reductive dehalogenation of trichloroethylene (Dragun, 1988). The Federal drinking water MCL for trans-1,2 DCE is 100 µg/l. Northern Regional Office staff also used an effluent limit of 100 µg/l for trans-1,2 DCE in four individual VPDES permits issued by that office. Human health-based water quality standards for this constituent are 700 µg/l for public water supplies and 140,000 µg/l for other surface waters. LeBlanc (1980) found that a concentration of 220,000 µg/l trans-1,2 DCE in water was lethal to 50 percent of the water fleas (*Daphnia magna*) tested. The TAC recommends that the effluent limit for trans-1,2 DCE be set at 100 µg/l.

6.4.7 Methylene Chloride

Methylene chloride is used as a solvent and paint remover, may be found in certain aerosols and pesticides, and is used to manufacture photographic film (Howard, 1990, and ATSDR, 2001b). According to the RTDF Bioremediation Consortium (1998), methylene chloride also may be derived from the anaerobic degradation of chloroform. The lowest freshwater LC50 concentration reported for methylene chloride is 193000 µg/l for fathead minnows (*Pimephales promelas*, Alexander, 1978). Burton and Fisher (1990) found that methylene chloride, at a concentration of 97000 µg/l, was lethal to 50 percent of the mummichogs (*Fundulus heteroclitus*) tested. The Federal drinking water MCL for methylene chloride is 5 µg/l and this is also the effluent limit that the Northern Regional Office staff used in the two permits that have limits for this constituent. The Water Quality Standards for methylene chloride are 47 µg/l and 16000 µg/l for public water supplies and other surface waters, respectively. The TAC recommends an effluent limit of 5 µg/l for methylene chloride.

6.4.8 Tetrachloroethylene

Tetrachloroethylene, also known as perchloroethylene, is used widely for dry cleaning fabrics and as a metal degreasing agent (Howard, 1990, and ATSDR, 1997). According to Yoshioka and others (1986), tetrachloroethylene at a concentration of 1800 µg/l was lethal to 50 percent of the water fleas (*Moina macrocopa*) tested. The lowest saltwater LC50 value reported for tetrachloroethylene is 1300 µg/l for daggerblade grass shrimp (*Palaemonetes pugio*, Horne et al., 1983). Applying the safety factor of 100 to these LC50 values results in limits of 18 µg/l and 13 µg/l, respectively. The human health-based water quality standards for tetrachloroethylene are 8 µg/l for public water supplies and 47 µg/l for other surface waters. The Federal drinking water MCL for tetrachloroethylene is 5 µg/l. Five individual VPDES permits in the Northern Regional Office have effluent limits for tetrachloroethylene. Four of these permits have an effluent limit of 5 µg/l and one of the permits has an effluent limit of 79 µg/l. The TAC recommends an effluent limit of 5 µg/l for tetrachloroethylene.

6.4.9 1,1,1 Trichloroethane

1,1,1 Trichloroethane (1,1,1 TCA) formerly was used as a solvent to dissolve glues and paints, a degreasing agent for metal parts, and is an ingredient of household products such as glues, spot removers, and aerosol sprays (ATSDR, 2006a, and Howard, 1990). According to ATSDR 2006a, TCA was not supposed to be

manufactured for domestic use in the United States after January 1, 2002, due to its effects on the ozone layer. The Federal drinking water MCL for 1,1,1 Trichloroethane (1,1,1 TCA) is 200 µg/l. Four individual VPDES permits in the Northern Regional Office have effluent limits for 1,1,1 TCA and the effluent limit in each permit is 200 µg/l. Virginia does not have promulgated water quality standards for 1,1,1 TCA. The lowest freshwater LC50 value for 1,1,1 TCA that is reported in the ECOTOX database is 11200 µg/l for water fleas (*Daphnia magna*, Cowgill, 1987). EPA (1978) found that 1,1,1 TCA at a concentration of 312000 was lethal to 50 percent of the opossum shrimp (*Americamysis bahia*) tested. If the customary safety factor of 100 is applied to these LC50 values, results in concentrations of 112 µg/l and 3120, respectively that are expected to be protective of aquatic and marine life. The most conservative or protective concentration for 1,1,1 TCA is the value that was derived from toxicity of this constituent to water fleas. The TAC recommends an effluent limit of 112 µg/l for 1,1,1 TCA.

6.4.10 1,1,2 Trichloroethane

1,1,2 TCA is a solvent and an intermediate in the production of 1,1 DCA (ATSDR 199b). Only one individual permit in the Northern Regional Office has an effluent limit for 1,1,2 TCA and the limit in that permit is 5 µg/l. The Federal drinking water MCL for 1,1,2 TCA also is 5 µg/l. The Virginia Water Quality Standards for 1,1,2 TCA are 6 µg/l for public water supplies and 420 µg/l for other surface waters. LeBlanc (1980) found that 1,1,2 TCA, at a concentration of 18,000 µg/l, was lethal to 50 percent of the water fleas (*Daphnia magna*) tested. The lowest LC50 value reported for this constituent for saltwater organisms is 27,000 µg/l (Adema and Vink, 1981). Applying the safety factor of 100 to these LC50 values results in concentration of 18 µg/l and 27 µg/l, respectively. The TAC recommends an effluent limit of 5 µg/l for 1,1,2 TCA.

6.4.11 Trichloroethylene

Trichloroethylene (TCE) is a solvent commonly used to remove grease from metal parts (Howard, 1990, and ATSDR, 2003). TCE also is an ingredient in certain adhesives, paint removers, typewriter correction fluids, and spot removers (ATSDR, 2003). TCE can be formed by the breakdown of tetrachloroethylene that has been released into the environment. The Federal drinking water MCL for TCE is 5 µg/l and this is the same effluent limit that the Northern Regional Office staff used for all three VPDES permits that contained limits for TCE. The promulgated water quality standard for public water supplies is 27 µg/l and the water quality standard for all other surface water is 810 µg/l. The lowest freshwater LC50 value reported to TCE is 1900 µg/l (Yoshioka, 1986). Ward and associates (1986) found that TCE at a concentration of 14000 µg/l was lethal to 50 percent of the opossum shrimp (*Americamysis bahia*) tested. Applying the safety factor of 100 to these LC50 values results in concentrations of 19 µg/l and 140 µg/l. The TAC recommends an effluent limit of 5 µg/l for TCE.

6.4.12 Vinyl Chloride

Most vinyl chloride is used to manufacture polyvinyl chloride (PVC, Howard, 1989, and ATSDR, 2006b). This constituent generally is not used as a solvent, but it is commonly found in the environment due the breakdown of other chlorinated hydrocarbon solvents (Dragun, 1988, and ATSDR, 2006b). The Federal drinking water MCL for vinyl chloride is 2 µg/l and this is the effluent limit that the DEQ Northern Regional Office staff have used for all three of their individual VPDES permits having a limit for this constituent. The Water Quality Standard for public water supplies is .23 µg/l and the water quality standard for other surface waters is 61 µg/l. The TAC recommends an effluent limit of 2 µg/l for vinyl chloride. This limit is the same as the drinking water MCL and, as a promulgated MCL, is both protective and achievable. Current analytical methods typically cannot quantify vinyl chloride or other volatile organic compounds at concentrations of less than 1 µg/l. MCLs are set at limits that are believed protective of human health and can be reached by current treatment technologies. Members of the TAC are not confident that an effluent limit of 2 µg/l for vinyl chloride may be achieved by current treatment technologies.

6.4.13 Carbon Tetrachloride

According to Howard (1990) large quantities of carbon tetrachloride are used for the chemical synthesis of fluorocarbon refrigerants and propellants. Carbon tetrachloride also is used as a degreaser, a cleaning fluid, and a grain fumigant pesticide (Howard, 1990, and ATSDR, 2005). The Water Quality Standards for carbon tetrachloride are 2.5 µg/l for public water supplies and 44 µg/l for other surface waters. The Federal drinking water MCL for carbon tetrachloride is 5 µg/l. DEQ staff in the Northern Regional Office have issued one individual VPDES permit having an effluent limit for carbon tetrachloride and that limit was 5 µg/l. Yoshioka and associates (1986) found that carbon tetrachloride at a concentration of 2000 µg/l was lethal to 50 percent of the Medaka, high-eyes (*Oryzias latipes*) tested. The lowest saltwater LC50 value listed in the ECOTOX database was 50,000 µg/l for sole order (*Pleuronectiformes*, Pearson and McConnell, 1975). The TAC recommends an effluent limit of 2.5 µg/l for carbon tetrachloride.

6.4.14 1,2 Dichlorobenzene

According to the National Toxicology Program (NTP), U.S. Department of Health and Human Services (1985), the major use of 1,2 dichlorobenzene is as an intermediate in the synthesis of other organic compounds including the herbicides propanil, diuron, and neburon. This constituent also is used as an engine cleaner and de-inking solvent, a degreasing agent, a heat exchange medium, and a fumigant pesticide (NTP 1985). The water quality standard for 1,2 dichlorobenzene in public water supplies is 2700 µg/l and the water quality standard for other surface waters is 17,000 µg/l. There is no promulgated Federal drinking water MCL for this constituent. Staff in the Northern Regional Office issued one individual VPDES permit having an effluent limit for 1,2 dichlorobenzene and the limit in that permit was 600 µg/l. EPA (1978) reported that 1,2 dichlorobenzene at a concentration of 1970 µg/l killed 50 percent of the opossum shrimp (*Americamysis bahia*) tested. The lowest freshwater LC50 value reported in the ECOTOX database for this constituent was 1580 µg/l for rainbow trout (*Oncorhynchus mykiss*, Call and Associates, 1983). Applying the customary safety factor of 100 to the LC50 value for rainbow trout results in a concentration of 15.8 µg/l. The TAC recommends an effluent limit of 15.8 µg/l for 1,2 dichlorobenzene.

6.4.15 Chlorobenzene

Chlorobenzene production has declined by over half since its peak of use in 1960 (ATSDR, 1998). Presently, chlorobenzene is used as a solvent for certain pesticides, a degreasing agent for automobile parts, and a chemical intermediate to make other chemicals (ATSDR, 1998). The Federal drinking water MCL for chlorobenzene is 100 µg/l. The water quality standards for this constituent are 680 µg/l for public water supplies and 21,000 µg/l for other surface waters. Birge and others (1979) reported that a concentration of 340 µg/l was lethal to 50 percent of the largemouth bass (*Micropterus salmoides*) they tested. The lowest saltwater LC50 value reported in the ECOTOX database for this constituent is 8900 µg/l for sheepshead minnows (*Cyprinodon variegates*, Heitmuller and others, 1981). Applying the customary safety factor of 100 to these LC50 values results in concentrations of 3.4 µg/l and 89 µg/l, respectively. The TAC recommends an effluent of 3.4 µg/l for chlorobenzene.

6.4.16 Trichlorofluoromethane

Trichlorofluoromethane, also known as Freon 11, was used as a propellant for aerosol sprays until its use for this application was banned in the United States on December 15, 1978 (Howard, 1990). Trichlorofluoromethane also is used as a refrigerant, foaming agent for polyurethane foams, solvent and degreaser, and fire extinguishing agent (Howard, 1990). Limited information exists for trichlorofluoromethane. There is no MCL for this constituent, no promulgated water quality standards, and no aquatic toxicity data that has been summarized in the ECOTOX database. The DEQ Northern Regional Office staff have written one individual permit having an effluent limit for this constituent and that effluent limit is 5 µg/l. EPA Region III has listed a risk-based value for trichlorofluoromethane in tap water and that concentration is 1300 µg/l. The TAC recommends an effluent limit of 5 µg/l for trichlorofluoromethane.

6.4.17 Chloroethane

According to ATSDR (1999c), chloroethane is used in the production of cellulose dyes, medicinal drugs,

and other commercial products. This constituent also is used as a solvent and refrigerant. Chloroethane is used to numb the skin prior to ear piercing and skin biopsies and also as a treatment for sports injuries (ATSDR, 1999c). Chloroethane has been shown to form as a degradation byproduct of other chlorinated hydrocarbon solvents (Howard, 1990, and Dragun, 1988). Like trichlorofluoromethane, little aquatic toxicity information exists for chloroethane. The DEQ Northern Regional Office staff have written one individual permit having an effluent limit for this constituent and that effluent limit is 5 µg/l. EPA Region III has listed a risk-based value for chloroethane in tap water and that concentration is 3.6 µg/l. The TAC recommends an effluent limit of 3.6 µg/l for chloroethane.

7.0 Administration of this General Permit Regulation

The general permit will have a fixed term of five (5) years effective upon Board approval. Every authorization to discharge under this general permit will expire at the same time and all authorizations to discharge will be renewed on the same date. Discharges will be covered under the general permit upon approval of the Registration Statement and delivery of a copy of the general permit to the applicant.

This general permit does not apply to any new or increased discharge that will result in significant effects to the receiving waters. That determination is made in accordance with the State Water Control Board's Antidegradation Policy contained in the Virginia Water Quality Standards, 9 VAC 25-260. Antibacksliding will also be considered prior to granting coverage under this general permit to operations currently discharging under another VPDES permit.

If an applicant for a discharge appears to qualify for this general permit, the applicant will be required to submit a general permit Registration Statement. The Board will review the Registration Statements received and either send a copy of the general permit to those that qualify, or send a copy of the application for an individual permit to those that do not qualify.

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Attachment 3

GENERAL PERMIT PAGES

**VPDES GENERAL PERMIT FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDIATION, AND HYDROSTATIC TESTS (VAG83)**

General Permit No.: VAG83
Effective Date: February 26, 2008
Expiration Date: February 25, 2013

GENERAL VPDES PERMIT FOR DISCHARGES FROM PETROLEUM CONTAMINATED SITES,
GROUNDWATER REMEDIATION, AND HYDROSTATIC TESTS

AUTHORIZATION TO DISCHARGE UNDER THE VIRGINIA POLLUTANT DISCHARGE
ELIMINATION SYSTEM PERMIT PROGRAM AND THE VIRGINIA STATE WATER CONTROL
LAW

In compliance with the provisions of the Clean Water Act, as amended, the State Water Control Law and regulations adopted pursuant thereto, the owner is authorized to discharge to surface waters at the locations identified in the accepted registration statement within the boundaries of the Commonwealth of Virginia, except to designated public water supplies or waters specifically named in other board regulations or policies which prohibit such discharges.

The authorized discharge shall be in accordance with this cover page, Part I - Effluent Limitations and Monitoring Requirements and Part II - Conditions Applicable to All VPDES Permits, as set forth herein.

If there is any conflict between the requirements of a Department of Environmental Quality approved cleanup plan and this permit, the requirements of this permit shall govern.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

1. GASOLINE CONTAMINATION -- FRESHWATER RECEIVING WATERS NOT LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Benzene (µg/l) ¹	NA	50.0	1/Month	Grab
Toluene (µg/l) ¹	NA	175.0	1/Month	Grab
Ethylbenzene (µg/l) ¹	NA	320.0	1/Month	Grab
Total Xylenes (µg/l) ¹	NA	33.0	1/Month	Grab
MTBE (methyl tert-butyl ether) (µg/l) ¹	NA	1,840.0	1/Month	Grab
pH (standard units)	6.0	9.0	1/Month	Grab
Total Recoverable Lead (µg/l) ²	NA	$e^{(1.273(\ln \text{ hardness})) - 3.259}$	1/Month	Grab
Hardness (mg/l CaCO ₃) ²	NL	NA	1/Month	Grab
Ethylene Dibromide (µg/l) ²	NA	5.3	1/Month	Grab
1,2 Dichloroethane (µg/l) ²	NA	990.0	1/Month	Grab
Ethanol (µg/l) ³	NA	4100.0	1/Month	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method 8021B (~~1998~~ 1996).

²Monitoring for this parameter is required only when contamination results from leaded fuel. Lead shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 method ~~9040B~~ 9040C. The minimum hardness concentration that will be used to

determine the lead effluent limit is 25 mg/l. 1,2 dichloroethane and EDB shall be analyzed by a current and appropriate EPA SW 846 Method or EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007).

³Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol. Ethanol shall be analyzed according to EPA SW 846 Method ~~8015B~~ 8015C or EPA SW 846 Method 8260B. Monitoring frequency shall be 1/month in the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency for ethanol be reduced from monthly to 1/quarter. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/quarter. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency for ethanol shall revert to 1/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date. Reports of quarterly monitoring shall be submitted to the DEQ regional office no later than the 10th day of April, July, October and January.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

2. GASOLINE CONTAMINATION -- FRESHWATER RECEIVING WATERS LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	2/Month ⁴	Estimate
Benzene (µg/l) ¹	NA	12.0	2/Month ⁴	Grab
Toluene (µg/l) ¹	NA	175.0	2/Month ⁴	Grab
Ethylbenzene (µg/l) ¹	NA	320.0	2/Month ⁴	Grab
Total Xylenes (µg/l) ¹	NA	33.0	2/Month ⁴	Grab
MTBE (methyl tert-butyl ether) (µg/l) ¹	NA	15.0	2/Month ⁴	Grab
pH (standard units)	6.0	9.0	2/Month ⁴	Grab
Total Recoverable Lead (µg/l) ²	NA	Lower of $e^{(1.273(\ln \text{hardness})) - 3.259}$ or 15	2/Month ⁴	Grab
Hardness (mg/l CaCO ₃) ²	NL	NL	2/Month ⁴	Grab
Ethylene Dibromide (µg/l) ²	NA	.169	2/Month ⁴	Grab
1,2 Dichloroethane (µg/l) ²	NA	3.8	2/Month ⁴	Grab
Ethanol (µg/l) ³	NA	4100.0	2/Month ⁵	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE shall be analyzed according to a current and appropriate EPA Method (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method 8021B (~~1998~~ 1996).

²Monitoring for this parameter is required only when contamination results from leaded fuel. Lead shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ 2007). The minimum hardness concentration that will be used to determine the lead effluent limit is 25 mg/l. EPA SW 846 Method 8011 or EPA Drinking Water Method 504.1 shall be used to analyze ethylene dibromide (EDB) in wastewaters discharged to

public water supplies. 1,2 dichloroethane shall be analyzed by a current and appropriate EPA SW 846 Method or EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007).

³Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol. Ethanol shall be analyzed according to EPA SW 846 Method ~~8015B~~ 8015C or EPA SW 846 Method 8260B.

⁴Monitoring frequency shall be 2/month for the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from 2/month to 1/month. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/month. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date.

⁵If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency for ethanol be reduced from 2/month to 1/quarter. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/quarter. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date. Reports of quarterly monitoring shall be submitted to the DEQ regional office no later than the 10th day of April, July, October, and January.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

3. CONTAMINATION BY PETROLEUM PRODUCTS OTHER THAN GASOLINE -- FRESHWATER RECEIVING WATERS NOT LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Naphthalene (µg/l) ¹	NA	10.0	1/Month	Grab *
Total Petroleum Hydrocarbons (mg/l) ²	NA	15.0	1/Month	Grab **
pH (standard units)	6.0	9.0	1/Month	Grab

NL = No Limitation, monitoring required

NA = Not Applicable

¹ Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007) or a current and appropriate EPA SW 846 Method.

² TPH shall be analyzed using EPA SW 846 Method ~~8015B~~ 8015C for diesel range organics, or by EPA SW 846 Method ~~8270C~~ 8270D. If method ~~8270C~~ 8270D is used, the lab must report the total of diesel range organics and polynuclear aromatic hydrocarbons.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

4. CONTAMINATION BY PETROLEUM PRODUCTS OTHER THAN GASOLINE -- FRESHWATER RECEIVING WATERS LISTED AS PUBLIC WATER SUPPLIES.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to freshwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	2/Month ⁴	Estimate
Naphthalene (µg/l) ¹	NA	10.0	2/Month ⁴	Grab
Benzene (µg/l) ²	NA	12.0	2/Month ⁴	Grab
MTBE (methyl tert-butyl ether)(µg/l) ²	NA	15.0	2/Month ⁴	Grab
Total Petroleum Hydrocarbons (mg/l) ³	NA	15.0	2/Month ⁴	Grab
pH (standard units)	6.0	9.0	2/Month ⁴	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007) or a current and appropriate EPA SW 846 Method.

²Benzene and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method.

³TPH shall be analyzed using EPA SW 846 Method ~~8015B~~ 8015C for diesel range organics, or by EPA SW 846 Method ~~8270C~~ 8270D. If Method ~~8270C~~ 8270D is used, the lab must report the total of diesel range organics and polynuclear aromatic hydrocarbons.

⁴Monitoring frequency shall be 2/month for the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from 2/month to 1/month. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/month. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

5. DISCHARGES OF HYDROSTATIC TEST WATERS -- ALL RECEIVING WATERS

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: Outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/discharge	Estimate
pH (standard units)	6.0	9.0	1/discharge	Grab
Total Petroleum Hydrocarbons (TPH, mg/l) ¹	NA	15.0	1/discharge	Grab
Total Organic Carbon (TOC, mg/l)	NA	NL	1/discharge	Grab
Total Residual Chlorine (TRC, mg/l)	NA	0.011	1/discharge	Grab
Total Suspended Solids (TSS)	NA	NL	1/discharge	Grab

NL = No Limitation, monitoring required

NA = Not Applicable

¹ TPH is the sum of individual gasoline range organics and diesel range organics or TPH-GRO and TPH-DRO to be measured by EPA SW 846 Method ~~8015B~~ ~~8015C~~ (1996 ~~2007~~) for gasoline and diesel range organics, or by EPA SW 846 Methods 8260B and ~~8270C~~ ~~8270D~~. If the combination of Methods 8260B and ~~8270C~~ ~~8270D~~ is used, the lab must report the total of gasoline range organics, diesel range organics and polynuclear aromatic hydrocarbons.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

6. GASOLINE CONTAMINATION—SALTWATER RECEIVING WATERS.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to saltwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Benzene (µg/l) ¹	NA	50.0	1/Month	Grab
Toluene (µg/l) ¹	NA	500.0	1/Month	Grab
Ethylbenzene (µg/l) ¹	NA	4.3	1/Month	Grab
Total Xylenes (µg/l) ¹	NA	74.0	1/Month	Grab
MTBE (methyl tert-butyl ether) (µg/l) ¹	NA	440.0	1/Month	Grab
pH (standard units)	6.0	9.0	1/Month	Grab
Total Recoverable Lead (µg/l) ²	NA	8.5	1/Month	Grab
Ethylene Dibromide (µg/l) ²	NA	5.3	1/Month	Grab
1,2 Dichloroethane (µg/l) ²	NA	990.0	1/Month	Grab
Ethanol (µg/l) ³	NA	4100.0	1/Month ³	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹ Benzene, Toluene, Ethylbenzene, Total Xylenes and MTBE shall be analyzed according to a current and appropriate EPA Wastewater Method 602 (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method 8021B (~~1998~~ 1996).

² Monitoring for this parameter is required only when contamination results from leaded fuel. Lead shall be analyzed according to a current and appropriate EPA Wastewater Method ~~239.2~~ 200.8 or 200.9 (40 CFR Part 136, ~~1996~~ 2007) or EPA SW 846 Method ~~7421~~ 7010 (~~1998~~ 2007). 1,2 dichloroethane and EDB (surface waters that are not public water supplies) should be analyzed by a current and appropriate EPA SW 846 Method or EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007).

³Monitoring for ethanol is only required for discharges of water contaminated by gasoline containing greater than 10% ethanol. Ethanol shall be analyzed according to EPA SW 846 Method ~~8015B~~ 8015C or EPA SW 846 Method 8260B. Monitoring frequency shall be 1/month in the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from monthly to 1/quarter. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/quarter. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 1/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date. Reports of quarterly monitoring shall be submitted to the DEQ regional office no later than the 10th day of April, July, October and January.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

7. CONTAMINATION BY PETROLEUM PRODUCTS OTHER THAN GASOLINE -- SALTWATER RECEIVING WATERS.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to saltwater receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Naphthalene (µg/l) ¹	NA	8.9	1/Month	Grab
Total Petroleum Hydrocarbons (mg/l) ²	NA	15.0	1/Month	Grab
pH (standard units)	6.0	9.0	1/Month	Grab

NL = No limitation, monitoring required

NA = Not applicable

¹ Naphthalene shall be analyzed by a current and appropriate EPA Wastewater Method from 40 CFR Part 136 (~~1996~~ 2007) or a current and appropriate EPA SW 846 Method.

² TPH shall be analyzed using EPA SW 846 Method ~~8015B~~ 8015C for diesel range organics or EPA SW 846 Method ~~8270C~~ 8270D. If Method ~~8270C~~ 8270D is used, the lab must report the total of diesel range organics and polynuclear aromatic hydrocarbons.

Part I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.

8. CONTAMINATION BY CHLORINATED HYDROCARBON SOLVENTS -- ALL RECEIVING WATERS.

During the period beginning with the permittee's coverage under this general permit and lasting until the permit's expiration date, the permittee is authorized to discharge to receiving waterbodies from outfall serial number _____. Samples taken in compliance with the monitoring requirements specified below shall be taken at the following location: outfall from the final treatment unit prior to mixing with any other waters.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Instantaneous Minimum	Instantaneous Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	1/Month	Estimate
Chloroform (CAS # 67663), (µg/l) ¹	NA	100.0	1/Month 2/Month if public water supply ²	Grab Grab
1,1 Dichloroethane (CAS # 75343) (µg/l) ¹	NA	4.0	1/Month 2/Month if public water supply ²	Grab Grab
1,2 Dichloroethane (CAS # 107062) (µg/l) ¹	NA	3.8	1/Month 2/Month if public water supply ²	Grab Grab
1,1 Dichloroethylene (CAS # 75354) (µg/l) ¹	NA	7.0	1/Month 2/Month if public water supply ²	Grab Grab
cis-1,2 Dichloroethylene (CAS # 159592) (µg/l) ¹	NA	70.0	1/Month 2/Month if public water supply ²	Grab Grab
trans 1,2 Dichloroethylene (CAS # 156605) (µg/l) ¹	NA	100.0	1/Month 2/Month if public water supply ²	Grab Grab
Methylene Chloride (CAS # 75092) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Tetrachloroethylene (CAS # 127184) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
1,1,1 Trichloroethane (CAS # 71556) (µg/l) ¹	NA	112.0	1/Month 2/Month if public water supply ²	Grab Grab
1,1,2 Trichloroethane (CAS # 79005) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Trichloroethylene (CAS # 79016) (µg/l) ¹	NA	5.0	1/Month	Grab

			2/Month if public water supply ²	Grab
Vinyl Chloride (CAS # 75014) (µg/l) ¹	NA	2.0	1/Month 2/Month if public water supply ²	Grab Grab
Carbon Tetrachloride (CAS # 56235) (µg/l) ¹	NA	2.5	1/Month 2/Month if public water supply ²	Grab Grab
1,2 Dichlorobenzene (CAS # 95501) (µg/l) ¹	NA	15.8	1/Month 2/Month if public water supply ²	Grab Grab
Chlorobenzene (CAS # 108907) (µg/l) ¹	NA	3.0	1/Month 2/Month if public water supply ²	Grab Grab
Trichlorofluoromethane (CAS # 75694) (µg/l) ¹	NA	5.0	1/Month 2/Month if public water supply ²	Grab Grab
Chloroethane (CAS # 75003) (µg/l) ¹	NA	3.6	1/Month 2/Month if public water supply ²	Grab Grab
pH (standard units)	6.0	9.0	1/Month 2/Month if public water supply ²	Grab Grab

NL = No limitation, monitoring required

NA = Not applicable

¹This constituent shall be analyzed by a current and appropriate gas chromatograph/mass spectroscopy method from EPA SW 846 or the EPA Wastewater Method series from 40 CFR Part 136 (~~1996~~ 2007).

²Monitoring frequency shall be 2/month for the first year of permit coverage. If the first year results demonstrate full compliance with the effluent limitations, the permittee may request that the monitoring frequency be reduced from 2/month to 1/month. The written request shall be sent to the appropriate regional office for review. Upon written notification from the DEQ regional office, monitoring frequency shall be reduced to 1/month. Should the permittee be issued a warning letter related to violation of effluent limitations, a notice of violation, or be the subject of an active enforcement action, monitoring frequency shall revert to 2/month, upon issuance of the letter or notice or initiation of the enforcement action and remain in effect until the permit's expiration date.

Part I

B. Special conditions.

1. There shall be no discharge of floating solids or visible foam in other than trace amounts.
2. The permittee shall sample each permitted outfall each calendar month in which a discharge occurs. When no discharge occurs from an outfall during a calendar month, the discharge monitoring report for that outfall shall be submitted indicating "No Discharge."
3. O & M Manual. If the permitted discharge is through a treatment works, within 30 days of coverage under this general permit, the permittee shall develop and maintain on site, an Operations and Maintenance (O & M) Manual for the treatment works permitted herein. This manual shall detail practices and procedures which will be followed to ensure compliance with the requirements of this permit. The permittee shall operate the treatment works in accordance with the O & M Manual. The manual shall be made available to the department upon request.
4. Operation schedule. The permittee shall construct, install and begin operating the treatment works described in the registration statement prior to discharging to surface waters. The permittee shall notify the department's regional office within five days after the completion of installation and commencement of operation.
5. Materials storage. Except as expressly authorized by this permit or another permit issued by the board, no product, materials, industrial wastes, or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation, or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of, or stored so as to permit a discharge of such product, materials, industrial wastes, or other wastes to state waters.
6. If the permittee discharges to surface waters through a municipal separate storm sewer system, the permittee shall, within 30 days of coverage under this general permit, notify the owner of the municipal separate storm sewer system of the existence of the discharge and provide the following information: the name and location of the facility, a contact person and telephone number; the nature of the discharge; and the number of outfalls.
7. Termination of coverage. Provided that the department agrees that the discharge covered under this general permit is no longer needed, the permittee may request termination of coverage under the general permit, for the entire facility or for specific outfalls, by submitting a request for termination of coverage. This request for termination of coverage shall be sent to the department's regional office with appropriate documentation or references to documentation already in the department's possession. Upon the permittee's receipt of the regional director's approval, coverage under this general permit will be terminated. Termination of coverage under this general permit does not relieve the permittee of responsibilities under other board regulations or directives.

Part II

Conditions Applicable To All VPDES Permits

A. Monitoring.

1. Samples and measurements taken as required by this permit shall be representative of the monitored activity.
2. Monitoring shall be conducted according to procedures approved under 40 CFR Part 136 or alternative methods approved by the U.S. Environmental Protection Agency, unless other procedures have been specified in this permit.
3. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals that will ensure accuracy of measurements.

B. Records.

1. Records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individuals who performed the sampling or measurements;
 - c. The dates and times analyses were performed;
 - d. The individual or individuals who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
2. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years, the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation; copies of all reports required by this permit; and records of all data used to complete the registration statement for this permit for a period of at least three years from the date of the sample, measurement, report or request for coverage. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or regarding control standards applicable to the permittee, or as requested by the board.

C. Reporting monitoring results.

1. The permittee shall submit the results of the monitoring required by this permit not later than the 10th day of the month after monitoring takes place unless another reporting schedule is specified elsewhere in this permit. Monitoring results shall be submitted to the department's regional office.
2. Monitoring results shall be reported on a Discharge Monitoring Report (DMR) or on forms provided, approved or specified by the department.
3. If the permittee monitors any pollutant specifically addressed by this permit more frequently than required by this permit using test procedures approved under 40 CFR Part 136 or using other test procedures approved by the U.S. Environmental Protection Agency or using procedures specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the department.
4. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this permit.

D. Duty to provide information. The permittee shall furnish to the department, within a reasonable time, any information which the board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The board may require the permittee to furnish, upon request, such plans, specifications, and other pertinent information as may be necessary to determine the effect of the wastes from his discharge on the quality of state waters or such other information as may be

necessary to accomplish the purposes of the State Water Control Law. The permittee shall also furnish to the department upon request copies of records required to be kept by this permit.

E. Compliance schedule reports. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

F. Unauthorized discharges. Except in compliance with this permit or another permit issued by the board, it shall be unlawful for any person to:

1. Discharge into state waters sewage, industrial wastes, other wastes, or any noxious or deleterious substances; or
2. Otherwise alter the physical, chemical or biological properties of such state waters and make them detrimental to the public health, to animal or aquatic life, to the use of such waters for domestic or industrial consumption, for recreation, or for other uses.

G. Reports of unauthorized discharges. Any permittee who discharges or causes or allows a discharge of sewage, industrial waste, other wastes or any noxious or deleterious substance into or upon state waters in violation of Part II F or who discharges or causes or allows a discharge that may reasonably be expected to enter state waters in violation of Part II F shall notify the department of the discharge immediately upon discovery of the discharge, but in no case later than 24 hours after the discovery. A written report of the unauthorized discharge shall be submitted to the department within five days of discovery of the discharge. The written report shall contain:

1. A description of the nature and location of the discharge;
2. The cause of the discharge;
3. The date on which the discharge occurred;
4. The length of time that the discharge continued;
5. The volume of the discharge;
6. If the discharge is continuing, how long it is expected to continue;
7. If the discharge is continuing, what the expected total volume of the discharge will be; and
8. Any steps planned or taken to reduce, eliminate and prevent a recurrence of the present discharge or any future discharges not authorized by this permit.

Discharges reportable to the department under the immediate reporting requirements of other regulations are exempted from this requirement.

H. Reports of unusual or extraordinary discharges. If any unusual or extraordinary discharge including a bypass or upset should occur from a treatment works and the discharge enters or could be expected to enter state waters, the permittee shall promptly notify, in no case later than 24 hours, the department by telephone after the discovery of the discharge. This notification shall provide all available details of the incident, including any adverse effects on aquatic life and the known number of fish killed. The permittee shall reduce the report to writing and shall submit the report to the department within five days of discovery of the discharge in accordance with Part II I 2. Unusual and extraordinary discharges include but are not limited to any discharge resulting from:

1. Unusual spillage of materials resulting directly or indirectly from processing operations;
2. Breakdown of processing or accessory equipment;
3. Failure or taking out of service some or all of the treatment works; and
4. Flooding or other acts of nature.

I. Reports of noncompliance. The permittee shall report any noncompliance which may adversely affect state waters or may endanger public health as follows:

1. An oral report shall be provided within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which shall be reported within 24 hours under this subsection:

- a. Any unanticipated bypass; and
- b. Any upset which causes a discharge to surface waters.

2. A written report shall be submitted within five days and shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and
- c. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The board may waive the written report on a case-by-case basis for reports of noncompliance under Part II I if the oral report has been received within 24 hours and no adverse impact on state waters has been reported.

3. The permittee shall report all instances of noncompliance not reported under Part II I 1 or 2, in writing, at the time the next monitoring reports are submitted. The reports shall contain the information listed in Part II I 2.

NOTE: The immediate (within 24 hours) reports required in Part II G, H and I may be made to the department's regional office. Reports may be made by telephone or by FAX. For reports outside normal working hours, leave a message and this shall fulfill the immediate reporting requirement. For emergencies, the Virginia Department of Emergency Services maintains a 24-hour telephone service at 1-800-468-8892.

J. Notice of planned changes.

1. The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. The permittee plans an alteration or addition to any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

- (1) After promulgation of standards of performance under §306 of the Clean Water Act which are applicable to such source; or

- (2) After proposal of standards of performance in accordance with §306 of the Clean Water Act which are applicable to such source, but only if the standards are promulgated in accordance with §306 of the Act within 120 days of their proposal;

- b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations nor to notification requirements specified elsewhere in this permit; or

- c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. The permittee shall give advance notice to the department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

K. Signatory requirements.

1. Registration statement. All registration statements shall be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy-making or decision-making functions for the corporation or (ii) ~~the manager of one or more manufacturing, production, or operating facilities employing~~

~~more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures~~ the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a public agency includes (i) the chief executive officer of the agency or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

2. Reports. All reports required by permits, and other information requested by the board shall be signed by a person described in Part II K 1, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Part II K 1;

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative thus may be either a named individual or any individual occupying a named position; and

c. The written authorization is submitted to the department.

3. Changes to authorization. If an authorization under Part II K 2 is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Part II K 2 shall be submitted to the department prior to or together with any reports or information to be signed by an authorized representative.

4. Certification. Any person signing a document under Parts II K 1 or 2 shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

L. Duty to comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the State Water Control Law and the Clean Water Act, except that noncompliance with certain provisions of this permit may constitute a violation of the State Water Control Law but not the Clean Water Act. Permit noncompliance is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

The permittee shall comply with effluent standards or prohibitions established under §307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under §405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if this permit has not yet been modified to incorporate the requirement.

M. Duty to reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall submit a new registration statement at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the board. The board shall not grant permission for registration statements to be submitted later than the expiration date of the existing permit.

N. Effect of a permit. This permit does not convey any property rights in either real or personal property or any exclusive privileges, nor does it authorize any injury to private property or invasion of personal rights, or any infringement of federal, state or local law or regulations.

O. State law. Nothing in this permit shall be construed to preclude the institution of any legal action under, or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any other state law or regulation or under authority preserved by §510 of the Clean Water Act. Except as provided in permit conditions on "bypassing" (Part II U) and "upset" (Part II V), nothing in this permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

P. Oil and hazardous substance liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Article 11 (§62.1-44.34:14 et seq.) of the State Water Control Law.

Q. Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes effective plant performance, adequate funding, adequate staffing, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

R. Disposal of solids or sludges. Solids, sludges or other pollutants removed in the course of treatment or management of pollutants shall be disposed of in a manner so as to prevent any pollutant from such materials from entering state waters.

S. Duty to mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

T. Need to halt or reduce activity not a defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

U. Bypass.

1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II U 2 and 3.

2. Notice.

- a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, prior notice shall be submitted, if possible, at least 10 days before the date of the bypass.

- b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Part II I.

3. Prohibition of bypass.

- a. Bypass is prohibited, and the board may take enforcement action against a permittee for bypass, unless:

- (1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II U 2.

b. The board may approve an anticipated bypass, after considering its adverse effects, if the board determines that it will meet the three conditions listed above in Part II U 3 a.

V. Upset.

1. An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of Part II V 2 are met. A determination made during administrative review of claims that noncompliance was caused by upset and before an action for noncompliance is not a final administrative action subject to judicial review.

2. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed, contemporaneous operating logs or other relevant evidence that:

- a. An upset occurred and that the permittee can identify the cause or causes of the upset;
- b. The permitted facility was at the time being properly operated;
- c. The permittee submitted notice of the upset as required in Part II I; and
- d. The permittee complied with any remedial measures required under Part II S.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

W. Inspection and entry. The permittee shall allow the director or an authorized representative, upon presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
4. Sample or monitor at reasonable times, for the purposes of ensuring permit compliance or as otherwise authorized by the Clean Water Act and the State Water Control Law any substances or parameters at any location.

For purposes of this section, the time for inspection shall be deemed reasonable during regular business hours, and whenever the facility is discharging. Nothing contained herein shall make an inspection unreasonable during an emergency.

X. Permit actions. Permits may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Y. Transfer of permits.

1. Permits are not transferable to any person except after notice to the department. Except as provided in Part II Y 2, a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued, or a minor modification made, to identify the new permittee and incorporate such other requirements as may be necessary under the State Water Control Law and the Clean Water Act.

2. As an alternative to transfers under Part II Y 1, this permit may be automatically transferred to a new permittee if:

- a. The current permittee notifies the department at least 30 days in advance of the proposed transfer of the title to the facility or property;
- b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
- c. The board does not notify the existing permittee and the proposed new permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Part II Y 2 b.

Z. Severability. The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

Attachment 4

REGISTRATION STATEMENT AND INSTRUCTIONS

**VPDES GENERAL PERMIT FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDIATION, AND HYDROSTATIC TESTS (VAG83)**

Please Type or Print all information

13. Estimate maximum flow rate of the discharge: _____ Gal/day.
14. Attach a diagram of the proposed wastewater treatment system identifying the individual treatment units.
15. Attach a topographic or other map which indicates the receiving waterbody name, the discharge point(s), the property boundaries, as well as springs, other surface waterbodies, drinking water wells, and public water supplies, which are identified in the public record or are otherwise known to the applicant, within a 1/2 mile radius of the proposed discharge(s).
16. Are central wastewater treatment facilities available to this site? Yes _____ No _____
If "yes", has the option of discharging to the central facilities been evaluated? What was the result of that evaluation? _____

17. Does this facility currently have a permit issued by the Board? Yes _____ No _____
If yes, please provide permit number: _____
18. Pollution Complaint Number(s) (if applicable) _____
19. Is the material being treated or discharged classified as a hazardous waste under the Virginia Hazardous Waste Regulation, 9 VAC 20-60? Yes _____ No _____
20. Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I do also hereby grant duly authorized agents of the Department of Environmental Quality, upon presentation of credentials, permission to enter the property for the purpose of determining the suitability of the general permit.

Signature: _____ Date: _____

Print Name: _____

Title: _____

REQUIRED ATTACHMENTS

Wastewater Characterization Analytical Data
Treatment Works Design Schematic Drawing
Topographic Map

For Department Use Only:

Waterbody _____

Basin _____ Stream Class _____ Section _____

Special Standards _____

**INSTRUCTIONS FOR COMPLETING THE VPDES GENERAL PERMIT
REGISTRATION STATEMENT FOR DISCHARGES FROM PETROLEUM CONTAMINATED
SITES, GROUNDWATER REMEDIATION AND HYDROSTATIC TESTS (VAG83)**

GENERAL

A Registration Statement must be submitted to the Department of Environmental Quality (DEQ) in order for DEQ to consider a proposed discharge for coverage under the VPDES General Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests (VAG83). Discharges not associated with petroleum-contaminated water, hydrostatic tests, or chlorinated hydrocarbon-contaminated water are not eligible for coverage under this general permit.

To apply for coverage, an owner must file a complete Registration Statement with the Department. Any owner proposing a new discharge must file a complete registration statement at least 30 days prior to the date planned for commencing operation of the new discharge. Any owner of an existing discharge covered by an individual VPDES permit who is proposing to be covered under this general permit must file a registration statement at least 180 days prior to the expiration date of the individual VPDES permit. Any owner of an existing discharge not currently covered by a VPDES permit who is proposing to be covered under this general permit must file a complete registration statement as soon as possible.

Items 1 and 2: FACILITY INFORMATION

Give the name of the business or other entity that occupies the site where the discharge will occur. Provide the street address or other information that will allow DEQ personnel to locate the site. Give a telephone number at the site so that DEQ can contact someone at the facility.

Item 3: OWNER INFORMATION

Provide the full name, street address and telephone numbers of the owner to whom the permit will be issued. This person, firm, public organization or other entity is the party responsible for the control of the facility's operation.

Item 4: NATURE OF BUSINESS

Give a brief statement as to what usual business activities are conducted at the site of contamination.

Item 5. PRODUCTS CAUSING THE CONTAMINATION

Provide information about the types of petroleum products or chlorinated hydrocarbons that have contaminated water at the site.

Item 6: PROPOSED ACTIVITIES

Select all of the categories that apply to this proposed discharge. If events at the facility will cause the discharge to change over time from one category to another, indicate all categories that are anticipated.

Item 7: SITE CHARACTERIZATION

For petroleum contaminated sites, please indicate if a Site Characterization Report (SCR) has been submitted to DEQ. NOTE: An SCR is required from the person responsible for conducting the release investigation and performing corrective action. If you are not the Responsible Person (RP), you are NOT required to submit an SCR.

Item 8. WASTEWATER CHARACTERIZATION

Characterize or describe the wastewater to be discharged, including the types of contaminants present in the wastewater. The characterization must include analytical data, including (but not limited to) chlorinated hydrocarbons, dissolved volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals.

Item 9: DISCHARGE LOCATION

Provide a narrative description of the point of discharge (e.g., northwest corner of intersection of First St. and Second Ave.) Give the name of the stream, lake, river, etc. that the discharge will go into (e.g., Unnamed Tributary to Clear Creek). If the discharge is to enter a storm drain, give the name of the owner of the storm drain system (e.g., Fairfax Co. storm

drain inlet).

Item s 10, 11, 12 and 13: DISCHARGE INFORMATION

Provide estimates of the frequency at which the discharge will occur, the duration of the discharge and of the amount and flow rate of wastewater to be discharged.

Item 14: TREATMENT WORKS DESIGN

Attach a line drawing that traces the flow of wastewater from one treatment unit to the next. This drawing may be a sketch that shows, conceptually, what system will be used to treat wastewater so that it will meet the effluent quality requirements of the general permit. Identify all treatment technologies that will be employed at the facility.

Item 15: TOPOGRAPHIC MAP

The topographic map should be a copy of the USGS 7.5 minute quadrangle that encompasses the facility and the surrounding property for at least 1/2 mile in all directions. Maps other than the USGS quadrangle may be substituted if they provide at least the same level of detail. The required information should be clearly marked on the map. Information regarding public water supplies and private wells may be obtained from local health department officials.

Item 16: CENTRAL WASTEWATER TREATMENT SYSTEM

The owner should investigate the possibility of discharging to a central wastewater treatment system prior to requesting coverage under this general permit. If a central wastewater treatment system is in the vicinity, but access for this discharge is denied, make that statement in the space provided.

Item s 17 and 18: PERMIT/POLLUTION COMPLAINT NUMBERS

If the facility has already been permitted to discharge and has a discharge permit number, or if the facility is responsible for the release and DEQ has issued a Pollution Complaint Number for the site, fill in the appropriate blanks with the permit or pollution complaint number. In some instances the applicant should fill in both questions; in others only one question may apply.

Item 19: HAZARDOUS WASTE STATEMENT

Indicate "yes" or "no" in the blanks provided.

Item 20. CERTIFICATION

State statutes provide for severe penalties for submitting false information on this registration statement. State regulations require that the registration statement be signed as follows:

- a. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
- c. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected official.

Attachment 5

LETTER REQUIREMENTS AND EXAMPLE LETTERS

GENERAL VPDES PERMIT FOR DISCHARGES FROM PETROLEUM CONTAMINATED SITES, GROUNDWATER REMEDIATION, AND HYDROSTATIC TESTS (VAG83)

Example Letter:

Letter requesting the RP to obtain coverage under General VPDES Permit for Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (VAG83)

Date

Addressee

re: Site Name/Location:
 Facility and Tank Identification (if applicable):
 DEQ Tracking Number: PC#____ (if applicable)

Dear _____:

Information presented to or known by Department of Environmental Quality (DEQ) staff indicates that one or more activities planned for the referenced site may cause a [***pick one:*** *discharge of petroleum contaminated water into surface water, discharge of chlorinated hydrocarbon contaminated water into surface water, discharge of hydrostatic test waters into surface water*]. In order to ensure the protection of human health and the environment, DEQ believes that these activities need to be covered under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (VAG83) (*staff may, at their discretion, list specific activities that they believe need to be permitted*).

Please complete the General VPDES Permit Registration Statement and return it to this office by [***date***]. The Registration Statement and Instructions for completing the Registration Statement are enclosed.

If you have any questions, please feel free to call me at [***phone number***].

Very truly yours,

DEQ Case Manager

enclosures General VPDES Permit Regulation for Discharges From Petroleum Contaminated Sites,
 Groundwater Remediation, and Hydrostatic Tests (9 VAC 25-120)
 Registration Statement and Instructions

(revised 02/26/08)

Requirements for Transmittal Letter

VPDES General Permit for Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (VAG83)

- Identify Permit #
- List site name and address
- List PC# (if applicable)
- The effective date of coverage under the permit is the date of the transmittal letter
- Remind permittee that they are required to submit DMRs on a monthly basis for each outfall.
- Inform permittee that copies of the DMRs are enclosed and the permittee is responsible for making additional copies of the DMRs
- Instruct permittee where to send DMRs
- Remind the permittee that they must develop and maintain an O&M Manual at the site if they will treat or store wastewater prior to discharge.
- Inform permittee that if they wish to terminate permit coverage for inactive outfalls or the entire site, they should fill out the enclosed Termination of Coverage Request form and send it to the Case Manager.
- Send letter via Certified Mail with Return Receipt Requested
- Signatory Requirements
The letter should be signed by the appropriate Regional Program Manager.
- Enclosures
Discharge Monitoring Report(s)
Permit Cover Page
Applicable Effluent Limitations and Monitoring Requirements (Part I.A pages)
Parts I.B and II of the Permit
Termination of Coverage Request form

(revised 02/26/08)

Example Letter:

Transmittal Letter for General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (VAG83)

Date

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Addressee

RE: Coverage under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests
VAG83 [fill in 4 digit tracking #]
[Site Name and Address]
[PC# (if applicable)]

Dear _____:

We have reviewed your Registration Statement received on **[date]** and determined that the **[discharge(s)]** outlined on that statement **[is/are]** hereby covered under the referenced general VPDES permit. The effective date of your coverage under this general permit is the date of this letter. The enclosed copy of the general permit contains the applicable effluent limitations, monitoring requirements and other conditions of coverage. **[Include this sentence if coverage is granted prior to June 11, 2008:** Note that the permit Part I.A Effluent Limitations and Monitoring Requirements tables contain corrections to the EPA 40 CFR Part 136 and EPA SW 846 test methods. These corrections were adopted by the Water Control Board on April 10th, and will become effective on June 11, 2008. The corrections should be applied immediately since they impact the laboratory test methods that are needed for proper permit sample analysis.]

The permit requires effluent sampling on a **[pick one: monthly, semi-monthly]** basis and reporting on a monthly basis. Discharge monitoring Reports (DMRs) that you may use to report sampling results are enclosed. You are responsible for making additional copies of the DMR(s) as needed. Separate DMRs must be completed for each permitted outfall and DMRs must be submitted for each outfall regardless of whether a discharge from that outfall occurred during the previous month. If a discharge did not occur from a particular outfall during the previous month, please write "no discharge" on the DMR. You are required to submit completed DMRs by the 10th of each month to:

[Compliance Auditor]
[Regional Office Address]

[Insert the following paragraph if wastewater will be treated or stored prior to discharge]

Information provided on the Registration Statement indicates that wastewater will be discharged through a treatment works. Within 30 days of the date of this letter, you are required to develop and maintain on site an Operation and Maintenance (O&M) Manual for this permitted treatment works (see Part I.B.3 of the Permit).

Page 2

This general permit will expire on February 25, 2013. The conditions of the permit require that you submit a new registration statement no later than 180 days prior to the date of permit expiration if you wish to continue coverage under the permit.

If you wish to terminate permit coverage for inactive outfalls or the entire site, please fill out the enclosed Termination of Coverage Request form and send it to [**Case Manager**] at the address listed above.

Please review the enclosed materials carefully. If you have any questions, please call [**Case Manager**] at [**phone number**].

Very truly yours,

[**Regional Program Manager**]

Enclosures: Discharge Monitoring Report(s)
 Permit Cover Page
 Applicable Effluent Limitations and Monitoring Requirements (Part I.A pages)
 Parts I.B and II of the Permit
 Termination of Coverage Request form

(revised 04/10/08)

Requirements for Termination of Coverage Letter
VPDES General Permit for Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests (VAG83)

- List the Permit #
- Identify the site name and location
- List the PC# (if applicable)
- Identify whether coverage is being terminated for the entire site or for specific outfalls. If specific outfalls are being terminated, it is recommended that you list each outfall that is being terminated by both outfall number and description (e.g., outfall 003 - pump test)
- Signatory Authority:
The letter must be signed by the appropriate Regional Program Manager.

(revised 02/26/08)

Example Letter

Termination of Coverage Under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests

Date

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Addressee

RE: Coverage under the General VPDES Permit for Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests

VAG83 fill in 4 digit tracking #

Site Name and Address

PC# (if applicable)

Dear _____:

Thank you for submitting a request to terminate coverage under the referenced permit. We have reviewed your request and coverage under the referenced permit is hereby terminated for: ***[fill in information from A or B below]***

[A. all surface water discharges at the referenced site]

[B. the following outfalls]

1. outfall #

outfall description (e.g. tank pit dewatering)

2. outfall #

outfall description]

The effective date of termination of coverage for the activities listed above is the date of this letter. Discharges from the activities listed above are no longer authorized under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Ground Water Remediation, and Hydrostatic Tests. Please note that submittal of the Termination of Coverage Request does not release you from liability for possible violations of the general permit.

If you have any questions, please call ***[Case Manager]*** at ***[phone number]***.

Very truly yours,

[Regional Program Manager]

(revised 02/26/08)

Attachment 6

TERMINATION OF COVERAGE REQUEST

**GENERAL VPDES PERMIT FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDICATION, AND HYDROSTATIC TESTS (VAG83)**

TERMINATION OF COVERAGE REQUEST
**VPDES General Permit for Petroleum Contaminated Sites, Groundwater
Remediation, and Hydrostatic Tests (VAG83)**

Date: _____

Attn: _____
(fill in name of Regional Case Manager)

Permit #: VAG83 _____

Site Name: _____
(please match facility name listed on the Registration Statement)

Please denote your termination of coverage request by placing an "x" in front of either request 1 or 2 below (do not place an "x" in front of both requests).

1. ____ I hereby request termination of coverage under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests for the facility listed above.
2. ____ I hereby request termination of coverage under the General VPDES Permit for Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests for the outfalls listed below:

Outfall Number	Outfall Description
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Signature: _____

Date: _____

Print Name: _____

Title: _____

FOR DEQ USE ONLY

Termination request accepted / not accepted (please circle decision) by: _____

Date: _____

(revised 02/26/08)

Attachment 7

TRANSFER OF OWNERSHIP AGREEMENT FORM

**GENERAL VPDES PERMIT FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDICATION, AND HYDROSTATIC TESTS (VAG83)**

TRANSFER OF OWNERSHIP AGREEMENT FORM
**VPDES General Permit for Petroleum Contaminated Sites, Groundwater
Remediation, and Hydrostatic Tests (VAG83)**

SUBJECT: Modification of VPDES Permit for Discharges from Petroleum Contaminated Sites,
Groundwater Remediation and Hydrostatic Tests - No. VAG83 _____

TO: Department of Environmental Quality
 _____ Regional Office

Attn: _____
Regional Program Manager

I hereby agree to the transfer of ownership modification to General VPDES Permit for Discharges from
Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests - No. VAG83 _____.
As the new permittee, I agree to accept all conditions and responsibilities of the permit.

The effective date of the transfer of ownership is:

_____, ____.

CURRENT PERMITTEE:

NEW PERMITTEE:

NAME: _____

NAME: _____

SIGNATURE: _____

SIGNATURE: _____

TITLE: _____

TITLE: _____

DATE: _____

DATE: _____

Revised (02/26/08)

Attachment 8

REGISTRATION STATEMENT EVALUATION CHECKLIST

**GENERAL VPDES PERMIT FOR DISCHARGES FROM
PETROLEUM CONTAMINATED SITES, GROUNDWATER
REMEDIATION, AND HYDROSTATIC TESTS (VAG83)**

Permit Application Checklist - VAG83

Permit # Issued: **VAG830**_____

mm/dd/yyyy

FACILITY Name:

Address:

Phone / Fax:

Registration Statement Received:

Additional Information Requested:

Additional Information Received:

2nd Additional Information Requested:

2nd Additional Information Received:

Administratively Complete:

Technically Complete:

Signed:

1st DMR Due:

1st Monitoring Period:

OWNER/RP Name:

Address:

Phone / Fax:

E-Mail:

CONTAMINATION:

☐ Petroleum

☐ Chlorinated Hydrocarbons

☐ Hydrostatic Testing

☐ Gasoline

☐ Other: _____

Yes / No

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Proper analytical data of raw wastewater received? <i>(Data should correspond with the type of contamination checked above. Ex: used oil includes VOCs, SVOCs & Metals; chlorinated hydrocarbons include all constituents present.)</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Waterbody identified? _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | Discharge frequency, volume and flow properly estimated? If no, circle missing/improper item. |
| <input type="checkbox"/> | <input type="checkbox"/> | Proposed wastewater treatment system diagram received? |
| <input type="checkbox"/> | <input type="checkbox"/> | O&M required? <i>(Required if the facility's system does any type of storing or on-site cleaning / treating prior to discharging to state waters.)</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Topographic or other map received with the following properly identified: |
| <input type="checkbox"/> | <input type="checkbox"/> | Receiving waterbody |
| <input type="checkbox"/> | <input type="checkbox"/> | Discharge point(s) |
| <input type="checkbox"/> | <input type="checkbox"/> | Property boundaries |
| | | within ½ mile radius of proposed discharge: |
| <input type="checkbox"/> | <input type="checkbox"/> | Springs |
| <input type="checkbox"/> | <input type="checkbox"/> | Other surface waterbodies |
| <input type="checkbox"/> | <input type="checkbox"/> | Drinking wells |
| <input type="checkbox"/> | <input type="checkbox"/> | Public Water Supplies (PWS) |
| <input type="checkbox"/> | <input type="checkbox"/> | PWS within 5 miles of proposed discharge? <i>(If within 5 miles, cannot issue a general permit.)</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Central wastewater treatment facility availability properly assessed? |
| <input type="checkbox"/> | <input type="checkbox"/> | Current permit issued by the Board? _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | PC #? _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | Hazardous waste? |
| <input type="checkbox"/> | <input type="checkbox"/> | Proper signature? |

EFFLUENT LIMITATIONS & MONITORING REQUIREMENTS

of Outfalls: _____

Receiving Water: Freshwater

Contamination by: Gasoline

PWS: ☐ Yes ☐ No

List of other petroleum products: _____

DMR Limit Set #: 1